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Result
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Maximum Match 100%
Listing first 45 summaries
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Perfect score:
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Maximum DB seq length: 2000000000
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                                                                                                                                                                                                                                                                                                                                                            score greater than or equal to the score of the result beir and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                              Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed,
209.4
203
168.6
168.6
161
156.4
156.4
154.8
154.8
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Match
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1: /cgn2_6/ptodata/2/pubpna/US07
2: /cgn2_6/ptodata/2/pubpna/PCT_
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35.1
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/ cgn2_6/ptodata/2/pubpna/US09E_PUBCOMB.seq: *
/ cgn2_6/ptodata/2/pubpna/US09E_PUBCOMB.seq: *
/ cgn2_6/ptodata/2/pubpna/US09C_PUBCOMB.seq: *
/ cgn2_6/ptodata/2/pubpna/US09C_PUBCOMB.seq: *
/ cgn2_6/ptodata/2/pubpna/US10A_PUBCOMB.seq: *
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US-10-178-449A-1

US-10-178-449A-4

US-10-178-449A-9

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US-10-178-449A-11

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US-10-178-449A-17
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               Sequence 48, Appl
Sequence 3, Appli
Sequence 3, Appli
Sequence 1, Appli
Sequence 46, Appl
Sequence 13, Appli
Sequence 9, Appli
Sequence 21, Appli
Sequence 21, Appli
Sequence 17, Appl
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65 18 US-10-636-026 72 15 US-10-178-449A 73 15 US-10-178-449A 74 15 US-10-178-449A 75 15 US-10-178-449A 76 15 US-10-178-449A 77 15 US-10-178-449A 78 15 US-10-178-449A 78 15 US-10-178-449A 79 15 US-10-178-449A 70 17 US-10-178-449A 70 18 US-10-178-213-1 70 19 US-09-729-584-3 71 19 US-10-178-449A 72 US-10-178-449A 73 19 US-10-178-449A 74 US-10-178-449A 75 US-10-178-449A 77 17 US-10-681-972-1 78 18 18-18-18-18-18-18-18-18-18-18-18-18-18-1
64 18 US-10-636-026-66 65 18 US-10-178-449A-72 15 US-10-178-449A-50 15 US-09-759-584-31 50 9 US-09-759-584-34 50 9 US-09-759-584-34 50 9 US-09-759-584-34 50 9 US-09-759-584-34 61 15 US-10-178-449A-6 61 15 US-10-178-449A-6 61 15 US-10-178-449A-6 61 15 US-09-759-584-34 61 15 US-09-759-584-34 61 17 US-10-178-449A-7 61 18 US-09-732-561-21 62 19 US-09-829-381A-1 63 17 US-10-681-972-1 64 17 US-10-681-972-1 65 17 US-10-681-972-1 66 17 US-10-681-972-1 67 18 US-09-759-584-48 68 17 US-09-759-584-48 69 US-09-759-584-48 60 17 US-10-388-361A-1 60 18 US-09-759-584-48 61 19 US-09-759-584-48 61 19 US-09-759-584-48 61 19 US-09-759-584-85 61 19 US-09-759-583-61 61 19 US-09-759-583-61 61 19 US-09-759-583-61 61 19 US-09-759-584-48 61 19 US-09-759-583-61 62 US-09-759-583-61 63 US-09-759-583-61 64 US-09-759-583-61 65 US-09-759-584-48 65 US-09-759-584-48 65 US-09-759-584-48 65 US-09-759-584-48 65 US-09-759-584-48 65 US-09-759-584-48
US-10-636-026-6 US-10-178-449A US-10-178-449A US-09-759-584-31 US-09-759-584-31 US-09-759-584-34 US-09-759-584-34 US-09-759-584-34 US-09-759-584-34 US-09-759-584-36 US-09-759-584-36 US-09-759-584-36 US-09-759-584-36 US-09-759-584-36 US-09-759-584-36 US-09-759-584-36 US-09-759-584-853A US-09-754-853A
US-10-636-026-026-036-036-036-036-036-036-036-036-036-03

## ALIGNMENTS

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APPLICANT: Weng, Zude
APPLICANT: Weng, Zude
FILE OF INVENTION: plant Defensins
FILE OF INVENTION: plant Defensins
FILE REFERENCE: 35718/249123
CURRENT APPLICATION NUMBER: US/10/178,449A
CURRENT FILING DATE: 2002-06-21
PRIOR APPLICATION NUMBER: US 10/030,516
PRIOR FILING DATE: 2000-05-03
PRIOR FILING DATE: 2000-05-03
PRIOR PPLICATION NUMBER: US 60/133,039
PRIOR APPLICATION NUMBER: US 60/133,039
PRIOR PILING DATE: 1999-05-07
NUMBER OF SEQ ID NOS: 51
SOFTWARE: FASTSEQ for Windows Version 4.0
SEQ ID NO 48
LENGTH: 529
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 1
US-10-178-449A-48
; Sequence 48°, Application US/10178449A
; Publication No. US20030140368A1
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APPLICANT:
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APPLICANT:
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APPLICANT: Herrmann, Rafael
                                                                                   LENGTH: 529
TYPE: DNA
ORGANISM: Vernonia mespilifolia
                    FEATURE:
NAME/KEY: misc_feature
LOCATION: n = A,T,C
OTHER INFORMATION: n = A,T,C
FEATURE:
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McCutchen, Billy Fred
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Rafalski, Jan antoni
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US-10-636-396-6

Sequence

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APPLICANT: Rafalski, Jan antoni
APPLICANT: Weng, Zude
TITLE OF INVENTION: Plant Defensins
FILE REFERENCE: 35718/249123
CURRENT APPLICATION NUMBER: US/10/178,449A
CURRENT APPLICATION NUMBER: US 10/030,516
PRIOR APPLICATION NUMBER: US 10/030,516
PRIOR APPLICATION NUMBER: PCT/US00/11952
PRIOR APPLICATION NUMBER: US 60/133,039
PRIOR FILING DATE: 2000-05-03
PRIOR FILING DATE: 1999-05-07
NUMBER: OF SEQ ID NOS: 51
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                                                                                                                                                                                                Best Local Similarity Matches 236; Conserva
                                                                                                                                                                                                                                                                                                                                                         SEQ ID NO 31
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Best Local Similarity 82.5%;
Matches 240; Conservative
                                                                                                                                                                                                                                     Query Match
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APPLICANT: Herrmann, Rafael
APPLICANT: Lu, Albert L.
APPLICANT: McCutchen, Billy |
                                                                                                                                                                                                                                                                                          TYPE: DNA
ORGANISM: Vernonia mespilifolia
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LOCATION: (25)...(372)
                                                                                                                                                                                                                                                                                                                                   LENGTH: 579
                                                                 215 CTGTGGCAATACGGGACATTGTGACAACCAATGTAAATCATGGGAGGGTGCGGCCCATGG
                                                                                                                                           155 AGATATCGCATCCGTTAGTGGAGAACTATGCGAGAAAGCTAGCAAGACATGGTCGGGAAA
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  AGCGTGTCATGTGCGTAACGGGAAACACATGTGTTTCTGTTACTTCAATTGTAAAAAAAGC
                                                                                                                    AGAAATCTCGAGTGTGAGAGCAGAGCTATGCGAGAGAGCTAGCAAGACATGGTCAGGCAA
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McCutchen, Billy Fred
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Rafalski, Jan antoni
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                                                                                                                                                                                              45.5%; Score 203; DB 15;
81.1%; Pred. No. 2.7e-46;
tive 0; Mismatches 55
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Pred. No. 4.2e-48;
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TITLE OF INVENTION: Plant Defensins
FILE REFERENCE: 35718/249123
CURRENT APPLICATION NUMBER: US/10/178,449A
CURRENT FILING DATE: 2002-06-21
PRIOR APPLICATION NUMBER: US 10/030,516
PRIOR FILING DATE: 2000-05-03
PRIOR APPLICATION NUMBER: PCT/US00/11952
PRIOR FILING DATE: 2000-05-03
PRIOR APPLICATION NUMBER: US 60/133,039
PRIOR APPLICATION NUMBER: US 60/133,039
PRIOR FILING DATE: 1999-05-07
NUMBER OF SEQ ID NOS: 51
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 3
LENGTH: 460
TYPE: DNA
ORGANISM: Dimorphotheca sinuata
US-10-178-449A-3
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                                                                                                                                                                                                                                                                                                                          Matches 195; Conservative
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Best Local Similarity
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APPLICANT: Herrmann, Rafael
APPLICANT: Lu, Albert L
APPLICANT: McCutchen, Billy Fred
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                                                                              207
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                                                                                                                                                                                                   215 CTGTGGCAATACGGGACATTGTGACAACCAATGTAAATCATGGGAGGGTGCGGCCCATGG
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                                                                                                                                                                                                                                           87 AGAAATCGCGACTGTGAGAAGTGCACTATGTGAGAAAGCTAGCAAGACATGGTCAGGCAA 146
                         CGAAAAGCTTGCTCAAGACAAACTTAAAGCCGAACAACTCGCTCAAGACAAACTTAATG 393
                                                                              TGCGTGTCATGTGCGTGGGGAAACACATGTGCTTCTGCTACTTCAATTGTAAAGAAGC
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CGAAAAGCTTGCCCAAGACAAGCTCAACGCTGAAAAATTCGGCCGTGATGACGTTAAAG 325
                                                                                                                                                             CTGTGGCAACACGGGACACTGTGACGACGAGTGTAAGTCGTGGGAGACTGCAGCCCATGG
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Rafalski, Jan antoni
                                                                                                                                                                                                                                                                                                                                           37.8%;
                                                                                                                                                                                                                                                                                                                          0; Mismatches
                                                                                                                                                                                                                                                                                                                                           Score 168.6; DB Pred. No. 1e-36;
                                                                                                                                                                                                                                                                                                                                                                DB 15;
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                                                                                                                                                                                                                                                                                                                                                                Length 460;
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; Sequence 1, Application US/10178449A; Publication No. US20030140368A1; GENERAL INFORMATION: ; APPLICANT: Famodu, Omolayo O.; APPLICANT: Herrmann, Rafael; APPLICANT: Lu, Albert L.; APPLICANT: MCCutchen, Billy Fred

US-10-178-449A-1

Miao, Guo-Hua

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APPLICANT: Weng, Zude
TITLE OF INVENTION: Plant Defensins
FILE REFERENCE: 35718/249123
CURRENT APPLICATION UNMBER: US/10/178,449A
CURRENT FILING DATE: 2002-06-21
FRIOR APPLICATION NUMBER: US 10/330,516
PRIOR FILING DATE: 2000-05-03
PRIOR APPLICATION NUMBER: PCT/US00/11952
PRIOR APPLICATION NUMBER: PCT/US00/11952
PRIOR FILING DATE: 2000-05-03
PRIOR FILING DATE: 2000-05-03
PRIOR FILING DATE: 1999-05-07
PRIOR FILING DATE: 1999-05-07
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                                                           APPLICANT: Weng, Zude
TITLE OF INVENTION: Plant Defensins
FILE REFERENCE: 35718/249123
CURRENT APPLICATION NUMBER: US/10/178,449A
CURRENT FILING DATE: 2002-06-21
PRIOR APPLICATION NUMBER: US 10/030,516
PRIOR FILING DATE: 2000-05-03
PRIOR APPLICATION NUMBER: PCT/US00/11952
PRIOR FILING DATE: 2000-05-03
PRIOR APPLICATION NUMBER: US 60/133,039
PRIOR APPLICATION NUMBER: US 60/133,039
PRIOR FILING DATE: 1999-05-07
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PAME/KEY: misc_feature; LOCATION: 321, 349, 416, 458, 474, 479, 482, OTHER INFORMATION: n = A,T,C or G
US-10-178-449A-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 46, Application US/10178449A Publication No. US20030140368A1
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SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL
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Best Local Similarity
SOFTWARE: FastSEQ for Windows Version 4.0 EQ ID NO 46
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                                               NUMBER OF SEQ ID NOS:
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TYPE: DNA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTGTGGCAACACGGGACACTGTGACGACCAGTGTAAGTCGTGGGAGACTGCAGCCCATGG 199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTGTGGCAATACGGGACATTGTGACAACCAATGTAAATCATGGGAGGGTGCGGCCCATGG 274
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McCutchen, Billy Fred
                                                                                                                                                                                                                                                                                                                   Presnail, James K.
Rafalski, Jan antoni
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Rafalski, Jan antoni
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CURRENT APPLICATION NUMBER: US/10/178,449A
CURRENT FILING DATE: 2002-06-21
PRIOR APPLICATION NUMBER: US 10/030,516
PRIOR FILING DATE: 2000-05-03
PRIOR FILING DATE: 2000-05-03
PRIOR ETLING DATE: 2000-05-03
PRIOR APPLICATION NUMBER: US 60/133,039
PRIOR APPLICATION NUMBER: US 60/133,039
PRIOR APPLICATION NUMBER: US 60/133,039
PRIOR FILING DATE: 1999-05-07
NUMBER OF SEQ ID NOS: 51
SOFTWARE: FBBG SEG for Windows Version 4.0
SEQ ID NO 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; NAME/KEY: CDS
; LOCATION: (14)...(340)
US-10-178-449A-46
                                                                        ; FEATURE:

; NAME/KEY: misc feature

; LOCATION: 424, 436

; OTHER INFORMATION: n = A,T,C or

US-10-178-449A-13
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APPLICANT: Famodu, Omolayo O.
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Best Local Similarity
Matches 194; Conserv
Query Match 35.1
Best Local Similarity 77.2
Matches 190; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE OF INVENTION: Plant Defensins FILE REFERENCE: 35718/249123
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TYPE: DNA
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                                                                                                                                                                                         LENGTH: 457
TYPE: DNA
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McCutchen, Billy Fred
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Rafalski, Jan antoni
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                 35.1%;
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 0;
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Score 156.4; DB 15;
Pred. No. 2.6e-33;
0; Mismatches 56;
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Pred. No. 1.4e-34;
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                                     DB 15;
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                                   Length
                                      457;
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155 AGATATCGCATCCGTTAGTGGAGAACTATGCGAGAAAGCTAGCAAGACATGGTCGGGAAA 214

Indels

0.

Gaps

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NUMBER OF SEQ ID NOS: 51
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 9
LENGTH: 463
TYPE: DNA
ORGANISM: Parthenium argentatum Grey
FEATURE:
NAME/KEY: misc_feature
LOCATION: 413
OTHER INFORMATION: n = A,T,C or G
US-10-178-449A-9
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TITLE OF INVENTION: Plant Defensins
FILE REFERENCE: 35718/249123
CURRENT APPLICATION NUMBER: US/10/178,449A
CURRENT FILING DATE: 2002-06-21
PRIOR APPLICATION NUMBER: US 10/030,516
PRIOR FILING DATE: 2000-05-03
PRIOR FILING DATE: 2000-05-03
PRIOR APPLICATION NUMBER: US 60/133,039
PRIOR APPLICATION NUMBER: US 60/133,039
PRIOR APPLICATION NUMBER: US 60/133,039
PRIOR FILING DATE: 1999-05-07
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US-10-178-449A-9
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Best Local Similarity
Matches 190; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Famodu, Omolayo O.
APPLICANT: Herrmann, Rafael
APPLICANT: Lu, Albert L.
APPLICANT: McCutchen, Billy
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                                                                                                                                       154 TTGTGGTAACACAAGACATTGTGACGACCAATGCAAGTCTTGGGAGGGTGCAGCCCATGG
                                                                                                                                                                       215 CTGTGGCAATACGGGACATTGTGACAACCAATGTAAATCATGGGAGGGTGCGGCCCATGG
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                                                                                                                                                                                                                 94 AGAAATCGGATCGGTGAAGGGAGAACTATGTGAGAAGGCAAGCCAAGACATGGTCTGGAAA
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   CGAAAAGCTTGCTCAAGACAAACTTAAAGCCGAACAACTCGCTCAAGACAAACTTAATGC
                                                               AGCTTGTCATGTGCGCGGGGGAAACACATGTGCTTCTGCTACTTCCAGTGCCCCAAAGC
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Rafalski, Jan antoni
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McCutchen, Billy Fred
Miao, Guo-Hua
                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                            35.1%;
                                                                                                                                                                                                                                                                                        Score 156.4; DB 15; Length Pred. No. 2.7e-33; O; Mismatches 56; Indels
                                                                                                                                                                                                                                                                                                                                Length
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                                                                                                                                                       RESULT 9
US-10-178-449A-21
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US-10-178-449A-11
                                                                                               Sequence 21, Application US/10178449A Publication No. US20030140368A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOFTWARE: FastSEQ for Windows Version 4.0 SEQ ID NO 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches 190;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
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APPLICANT: Weng, Zude
TITLE OF INVENTION: Plant Defensins
FILE REFERENCE: 35718/249123
CURRENT APPLICATION NUMBER: US/10/178,449A
CURRENT APPLICATION DATE: 2002-06-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION NUMBER: US 10/030,516
PRIOR FILING DATE: 2000-05-03
PRIOR APPLICATION NUMBER: PCT/US00/11952
PRIOR FILING DATE: 2000-05-03
PRIOR APPLICATION NUMBER: US 60/133,039
PRIOR APPLICATION NUMBER: US 60/133,039
PRIOR FILING DATE: 1999-05-07
NUMBER OF SEQ ID NOS: 51
                                                             APPLICANT: Famodu, Omolayo APPLICANT: Herrmann, Rafae
                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Famodu, Omolayo O. APPLICANT: Herrmann, Rafael
       APPLICANT:
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                                                                                                                                                                                                                                                                                                                                                                                                                              275 AGCGTGTCATGTGCGTAACGGGAAACACATGTGTTTCTGTTACTTCAATTGTAAAAAAAGC
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Herrmann, Rafael
Lu, Albert L.
McCutchen, Billy Fred
Miao, Guo-Hua
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Rafalski, Jan antoni
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 156.4; DB Pred. No. 3e-33; O; Mismatches
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Gaps

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160

340

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SEQ ID NO 21
LENGTH: 458
TYPE: DNA
ORGANISM: Parthenium argentatum G:
FEATURE:
NAME/KEY: misc_feature
LOCATION: 322, 375, 402, 452
OTHER INFORMATION: n = A,T,C or G
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FILE REFERENCE: 35718/249123
CURRENT APPLICATION NUMBER: US/10/178,449A
CURRENT FILING DATE: 2002-06-21
PRIOR APPLICATION NUMBER: US 10/030,516
PRIOR FILING DATE: 2000-05-03
PRIOR APPLICATION NUMBER: PCT/US00/11952
PRIOR FILING DATE: 2000-05-03
PRIOR APPLICATION NUMBER: US 60/133,039
PRIOR APPLICATION NUMBER: US 60/133,039
PRIOR PILING DATE: 1999-05-07
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APPLICANT: Rafalski, Jan antoni
APPLICANT: Weng, Zude
TITLE OF INVENTION: Plant Defensins
FILE REFERENCE: 35718/249123
CURRENT APPLICATION NUMBER: US/10/178,449A
CURRENT FILING DATE: 2002-06-21
PRIOR APPLICATION NUMBER: US 10/030,516
PRIOR FILING DATE: 2000-05-03
PRIOR APPLICATION NUMBER: PRIOR SILING DATE: 2000-05-03
PRIOR APPLICATION NUMBER: US 60/133,039
PRIOR APPLICATION NUMBER: US 60/133,039
PRIOR FILING DATE: 1999-05-07
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Publication No.
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Best Local Similarity 76.8%;
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APPLICANT:
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SOFTWARE: FastSEQ for Windows Version 4.0
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                                                                                                                                                                                                                                                                                                                                         APPLICANT: Famodu, Omolayo O.
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Lu, Albert L.
McCutchen, Billy Fred
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vo. US20030140368A1
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Rafalski, Jan antoni
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.es 57; Indels
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TITLE OF INVENTION: Sunflower Anti-Pathogenic Proteins and TITLE OF INVENTION: Genes and their Uses FILE REFERENCE: 5718-90
CURRENT APPLICATION NUMBER: US/10/636,396
CURRENT FILING DATE: 2003-08-07
PRIOR APPLICATION NUMBER: US/09/589,733C
PRIOR FILING DATE: 2000-06-08
PRIOR FILING DATE: 1999-06-23
PRIOR APPLICATION NUMBER: 60/162,904
PRIOR APPLICATION NUMBER: 60/162,904
PRIOR APPLICATION NUMBER: 60/162,904
PRIOR FILING DATE: 1999-11-01
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US-10-178-449A-17
                                                                                                                                   ; LENGTH: 565
; TYPE: DNA
; ORGANISM: Helianthus annuus
US-10-636-396-6
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APPLICANT: Bidney, Dennis L.
APPLICANT: Crasta, Oswald F
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SOFTWARE: FRANCSEQ for Windows Version 4.0
SEQ ID NO 17
LENGTH: 460
                                                                Query Match
Best Local Similarity
Matches 189; Conserv
                                                                                                                                                                                                    NUMBER OF SEQ ID NOS: 41
SOFTWARE: FastSEQ for Windows Version
SEQ ID NO 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 6, Application US/10636396 Publication No. US20040073971A1
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Best Local Similarity
Matches 189; Conserv
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NAME/KEY: misc_feature
LOCATION: 342
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                 155 AGATATCGCATCCGTTAGTGGAGAACTATGCGAGAAAGCTAGCAAGACATGGTCGGGAAA 214
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AGAAATCGGATCGGTGAAAGGAGAATTATGTGAGAAGGCAAGCCAGACATGGTCCGGAAC 158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGAGAAGATGGCCCAGGATAAACTCCGAGCTGAAGAGCTTGCCCAAGGAGAAGATTGAAGC
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Lu, Guihua
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                                                                  Conservative
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                                                             Score 154.2; DB 1/; Pred. No. 1.2e-32; Wismatches 58;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 154.8; DB 15;
Pred. No. 7.4e-33;
0; Mismatches 57;
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                                                                                                 Length 565;
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Sequence 6, Application US/10636026

Publication No. US20040111761A1

GENERAL INFORMATION:

APPLICANT: Bidney, Dennis L.

APPLICANT: Craste, Oswald R.

APPLICANT: Duvick, Jon

APPLICANT: Lu, Guihua

APPLICANT: Lu, Guihua

ITITLE OF INVENTION: Genes and their Uses

ITITLE OF INVENTION: USUAFIONER: US/10/636,026

CURRENT APPLICATION NUMBER: US/09/589,733C

PRIOR APPLICATION NUMBER: US/09/589,733C

PRIOR APPLICATION NUMBER: 60/140,646

PRIOR FILING DATE: 1999-06-23

PRIOR APPLICATION NUMBER: 60/140,546

PRIOR FILING DATE: 1999-11-01

NUMBER OF SEQ ID NOS: 41

SOFTWARE: FastSEQ for Windows Version 3.0
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; ORGANISM: Helianthus annuus
US-10-636-026-6
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US-10-636-026-6
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                                                                                                                                                                                                                                                                                   215 CTGTGGCAATACGGGACATTGTGACAACCAATGTAAATCATGGGAGGGTGCGGCCCATGG
                                                                                                                                                                                                                                                                                                                                              155 AGATATCGCATCCGTTAGTGGAGAACTATGCGAGAAAGCTAGCAAGACATGGTCGGGAAA 214
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CGAAAAG 345
                                    CCAAAAG 401
                                                                              CCAGAAGTTGGCTCAGGATAAACTCAGAGCGGAAGAGCTCGCCAAGGAGAAGATTGAACC
                                                                                                                  CGAAAAGCTTGCTCAAGACAAACTTAAAGCCGAACAACTCGCTCAAGACAAACTTAATGC
                                                                                                                                                            AGCTTGTCACGTGCGCGATGGGAAACACATGTGCTTCTGCTACTTCAACTGTTCCAAAGC
                                                                                                                                                                                                AGCGTGTCATGTGCGTAACGGGAAACACATGTGTTTCTGTTACTTCAATTGTAAAAAAAGC
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76.5%;
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                                                                                                                                                                                                                                                                                                                                                                                                        58;
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RESULT 13

APPLICANT:

Lu, Albert L.
McCutchen, Billy Fred
Miao, Guo-Hua

APPLICANT: TITLE OF I APPLICANT: APPLICANT:

INVENTION: Plant Defensins

Presnail, James K. Rafalski, Jan antoni Weng, Zude

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CURRENT APPLICATION NUMBER: US/10/178,449A
CURRENT FILING DATE: 2002-06-21
PRIOR APPLICATION NUMBER: US 10/030,516
PRIOR FILING DATE: 2000-05-03
PRIOR APPLICATION NUMBER: POT/US00/11952
PRIOR FILING DATE: 2000-05-03
PRIOR APPLICATION NUMBER: US 60/133,039
PRIOR APPLICATION NUMBER: US 60/133,039
PRIOR FILING DATE: 1999-05-07
NUMBER OF SEQ ID NOS: 51
SOFTWARE: FASESEQ for Windows Version 4.0
SEQ ID NO 19
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US-10-178-449A-23
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Sequence 23, Application US/10178449A
Publication No. US20030140368A1
GENERAL INFORMATION:
APPLICANT: Famodu, Omolayo O.
APPLICANT: Herrmann, Rafael
APPLICANT: Lu, Albert L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 19, Application US/10178449A Publication No. US20030140368A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
Matches 188; Conserv
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APPLICANT:
APPLICANT:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Famodu, Omolayo O.
APPLICANT: Herrmann, Rafael
APPLICANT: Lu, Albert L.
APPLICANT: McCutchen, Billy Fred
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NAME/KEY: misc feature
1. The state of the state
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OTHER INFORMATION: n = A,T,C or
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TYPE: DNA
ORGANISM: Parthenium argentatum Grey
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                                                                                                                                                                                                                                                                                                                                                                                                                                                 334 TGAAAA 339
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Presnail, James K.
Rafalski, Jan antoni
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214 153

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APPLICANT: Rafalski, Jan antoni
APPLICANT: Weng, Zude
FITTLE OF INVENTION: Plant Defensins
FILE REFERENCE: 35718/249123
CURRENT FILING DATE: 2002-06-21
CURRENT FILING DATE: 2000-05-03
PRIOR APPLICATION NUMBER: US 10/030,516
PRIOR APPLICATION NUMBER: PCT/US00/11952
PRIOR APPLICATION NUMBER: PCT/US00/11952
PRIOR APPLICATION NUMBER: US 60/133,039
PRIOR APPLICATION NUMBER: US 60/133,039
PRIOR APPLICATION NUMBER: US 60/133,039
PRIOR FILING DATE: 1999-05-07
NUMBER OF SEQ ID NOS: 51
SOFTWARE: FASTSEQ for Windows Version 4.0
SEQ ID NO 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQ ID NO 23
; LENGTH: 472
; TYPE: DNA
; ORGANISM: Parthenium argentatum Grey
FEATURE:
; NAME/KEY: misc_feature
; LOCATION: 368
; OTHER INFORMATION: n = A,T,C or G
                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
APPLICANT: Famodu, Omolayo O.
APPLICANT: Herrmann, Rafael
APPLICANT: Lu, Albert L.
APPLICANT: McCutchen, Billy Fr
APPLICANT: McCutchen, Billy Fr
APPLICANT: Mao, Guo-Hua
APPLICANT: Presnail, James K.
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CURRENT APPLICATION NUMBER: US/10/178,449A
CURRENT FILING DATE: 2002-06-21
PRIOR APPLICATION NUMBER: US 10/030,516
PRIOR APPLICATION NUMBER: PCT/US00/11952
PRIOR PILING DATE: 2000-05-03
PRIOR PILING DATE: 2000-05-03
PRIOR PILING DATE: 2000-05-03
PRIOR PILING DATE: 1999-05-07
NUMBER OF SEQ ID NOS: 51
SOFTWARE: FBSUSEQ for Windows Version 4.0
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches 188;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   266
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             155 AGATATCGCATCCGTTAGTGGAGAACTATGCGAGAAAGCTAGCAAGACATGGTCGGGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       215 CTGTGGCAATACGGGACATTGTGACAACCAATGTAAATCATGGGAGGGTGCGGCCCATGG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGAAAAGCTTGCTCAAGACAAACTTAAAGCCGAACAACTCGCTCAAGACAAACTTAATGC 394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGCTTGTCATGTGCGCGGTGGGAAACACATGTGCTTCTGCTACTTCCAGTGCCCCAAAGC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Herrmann, Rafael
Lu, Albert L.
McCutchen, Billy Fred
                                                                                                                                                                                                                                                                                                                                                                       Presnail, James K.
Rafalski, Jan antoni
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0,
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; FEATURE:

, NAME/KEY: misc.feature

LOCATION: 276, 288, 349, 438

; OTHER INFORMATION: n = A,T,C

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Best Local Similarity
Matches 192; Conserv
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333
                          394 CCCAAAAGCTTGACCGTGATGCCAAGA 420
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                                                                               CGAAAAGCTTGCTCAA-GACAAACTTAAAGCCGAACAACTCGCTCAAGACAAACTTAATG 393
                                                                                                                              AGCGTGTCATGTGCGTAACGGGAAACACATGTGTTTCTGTTACTTCAATTGTAAAAAAGC
GCTGAAAAAGAGCCAGNCAAACCTTGA
                                                         CGANAAGATGGCCCANGGATAAACTCCGAGCTGAAGAAGCTTGCCAAGGAGAAGATTGAA 332
                                                                                                              AGCTTGTCATGTGCGCGGGGAAACACATGTGCTTCTGCTACTTCCAGTGCCCCCAAAGC
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                                                                                                                                                                                                                                                                                              31.0%;
                                                                                                                                                                                                                                                                                   0;
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                                                                                                                                                                                                                                                                                 Score 138.4; DB 15;
Pred. No. 2.8e-28;
0; Mismatches 74;
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                                                                                                                                                                                                                                                                                                             DB 15; Length 439;
                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                   1;
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                                                                                                               272
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Search completed: March 18, 2005, 19:33:33 Job time : 422 secs

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265

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Result
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Maximum
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Perfect score:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Post-processing:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB seq length: 0
DB seq length: 2000000000
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215.2
215.2
212
209.4
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177.2
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Gapop 10.0 , Gapext 1.0
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Maximum Match 100%
Listing first 45 summaries
   48.3
48.3
47.5
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geneseqn2003cs:*
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522
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                                                                                                                         AAZ51379
AAZ99323
AAZ99326
AAZ99336
AAZ51396
AAZ51396
AAZ99325
AAZ99325
AAZ99335
AAZ993315
AAZ77214
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               ADM77184
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                                                                              AAZ99324
                                                                                                                                                                                                                                                                                                          SUMMARIES
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6804.651 Million cell updates/sec
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Aaz51379 Dahlia me
Aaz99326 DNA encod
Aaz99326 DNA encod
Aaz99336 DNA encod
Aaz51396 Portion o
Aaz99335 DNA encod
Aaz99335 DNA encod
Aaz99335 DNA encod
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Aaz99326 Plant def
Adm77186 African d
Aaz99327 DNA encod
Aaa54386 Plant def
Adm77184 African d
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Aaz99332 DNA encod
Aaa59332 DNA encod
                                                                                                                                                                                                                                                                     Description
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Aaz51375 Dahlia me	3 AAZ51375	399	32.9	146.8	45
Adm77206 Mexican i	11 ADM77206	472	34.3	153.2	44
Aaa54397 Plant def	5 AAA54397	472		153.2	43
Adm77202 Mexican i	11 ADM77202	464	34.3	153.2	42
Aaa54395 Plant def	5 AAA54395	464		153.2	41
Aac84841 Sunflower	5 AAC84841			154.2	40
Adm77200 Mexican i	11 ADM77200			154.8	39
Aaa54394 Plant def	5 AAA54394			154.8	38
Adm77204 Mexican i	11 ADM77204			154.8	37
Aaa54396 Plant def	5 AAA54396		34.7	154.8	36
Adm77194 Mexican i	11 ADM77194		σ	156.4	35
Aaa54391 Plant def	5 AAA54391		35.1	156.4	34
Adm77192 Mexican i	11 ADM77192		35.1	156.4	33
Aaa54390 Plant def	5 AAA54390		35.1	156.4	32
Adm77196 Mexican r	11 ADM77196			156.4	<u>υ</u>
Aaa54392 Plant def	5 AAA54392		35.1	156.4	30
Dahli	3 AAZ51376			157.8	29
Adm77229 Sunflower	11 ADM77229	461	36.1	161	28
Aaz99337 DNA encod	3 AAZ99337			164	27
Aaz99328 DNA of pr	3 AAZ99328		37.1	165.6	26
Aaz51397 Portion o	3 AAZ51397			165.6	25
Aaz99339 DNA encod	3 AAZ99339			166	24
Aaz99338 DNA encod	3 AAZ99338				23
Aaz99330 DNA encod	3 AAZ99330		37.2	166	22
Aaz99331 DNA encod	3 AAZ99331	437	37.2	166	21

## ALIGNMENTS

AAZ51379 standard; DNA;

446

ВP

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RESULT 1
AAZ51379
ID AAZ5
XX AAZ5
XX DAA1
AC DAA1
XX D
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Dahlia merckii antimicrobial protein Dm-AMP1 gene
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      WO200011196-A1.
                                                                                                                                                                                                                                                            mat_peptide
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                                                                                                                                                           misc_feature
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65. .156
                                                                                                                                                              /product=
327. .446
                                                                                                                                                                                                                                                                                           157. .446
/*tag= d
/number= 2
                                                  /*tag= g
/note= "Encodes protein which may be used as cleavable
/inker in the co-expression of multiple proteins"
                                                                                                                                                                                                                                                            177. .326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /*tag=
                                                                                                                                                                                                                              *tag=
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /product= "Antimicrobial protein Dm-AMP1"
/note= "Does not include stop codon"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          note= "excludes intron"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             *tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ь
                                                                                                                                                                                                   "Mature
                                                                                                                                                                                            Dm-AMP1 protein"
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RESULT 2
AAZ99323
ID AAZ9
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AC AAZ9
XX
AC O3-C
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                        03-JUL-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The present sequence is a Dahlia merckii cDNA encoding an antimicrobial preproprotein Dm-ANP1. This sequence is useful in the production of transgenic plants which show improved resistance to infections by microorganisms such as bacteria and fungi. Transgenic plants include e.g. field crops, fruits and vegetables, such as canola, sunflower, tomato,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Polynucleotide sequences and expression products useful for producing transgenic plants that are resistant to microbial infections.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2000-237658/20
P-PSDB; AAY70315.
                                                            AAZ99323;
                                                                                                 AAZ99323 standard;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Evans IJ, Ray JA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              banana, pear and mango
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATGGTGAATCGGTCGGTTGCGTTCTCCGCGTTCGTTCTGATCCTTTTCGTGCTCGCCATC
                                                                                                                                                                                                                       AAGTGGTTCCAAACGTTGAACATCCG 446
                                                                                                                                                                                                                                                                                                      AAGCCGAACAACTCGCTCAAGACAAACTTAATGCCCAAAAGCTTGACCGTGATGCCAAGA
                                                                                                                                                                                                                                                                                                                                                                                 ACATGTGTTTCTGTTACTTCAATTGTAAAAAAAGCCGAAAAGCTTGCTCAAGACAAACTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCAATGTAAATCATGGGAGGGTGCGGCCCATGGAGCGTGTCATGTGCGTAACGGGAAAC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTTTATGTGTTCTGACAAGTTGCAAATATTGAGTAGATATCGCATCCGTTAGTGGAGAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCAGGTTATCAAATCTTTAGTTCATTTATTGAATATGATAGTATTTATATTCTTTTATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCAGGTTATCAAATCTTTAGTTCATTTATTGAATATGATAGTATTTATATTCTTTTATGG
                                                                                                                                                                                                                                                                            AAGCCGAACAACTCGCTCAAGACAAACTTAATGCCCAAAAGCTTGACCGTGATGCCAAGA
                                                                                                                                                                                                                                                                                                                                                         ACATGTGTTTCTGTTACTTCAATTGTAAAAAAAGCCGAAAAGCTTGCTCAAGACAAACTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATGGTGAATCGGTTGCGTTCTCCGCGTTCGTTCTGATCCTTTTTCGTGCTCGCCATC
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                        (first entry)
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                                                                                                 DNA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 446; DB 3;
Pred. No. 9.9e-113;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                   446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 446;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
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Best Local Sin
Matches 446;
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Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                    The present sequence encodes a Dahlia antimicrobial protein (AMP) 1. 71 AMP1 protein is used to produce transgenic plants, using the method of the invention. The specification describes methods for improving expression levels of one or more proteins in a transgenic plant. The method comprises inserting a DNA sequence having a promoter region operably linked to two or more protein encoding regions separated by a DNA sequence coding for a linker propeptide and a terminator region. The method is used to produce proteins in plants. The linker propeptide
                                                                                                                                                                                                                                                               comprising a cleavage site, whereby the expressed polyprotein is post-translationally processed into the component protein molecules. The propeptide sequence is rich in amino acids A, V, S and T and contains dipeptidic sequences consisting of either two acidic, two basic or on acidic and one basic residue as a cleavable linker sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        exon
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                                                                                                                                                                                                                            Sequence 446 BP; 128 A; 86 C; 104 G; 128 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Example 1; Fig 1; 151pp; English
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Broekaert WF,
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04-DEC-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         17-AUG-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  02-MAR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      mat_peptide
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DNA encoding the Dahlia antimicrobial protein 1 (AMP1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO200011175-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (ZENE ) ZENECA
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               61
                                                                                 1 ATGGTGAATCGGTCGGTTGCGTTCTCCGCCGTTCGTTCTGATCCTTTTTCGTGCTCGCCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    expression;
TCAGGTTATCAAATCTTTAGTTCATTTATTGAATATGATAGTATTTATATTCTTTTATGG
                                                         ATGGTGAATCGGTCGGTTGCGTTCTCCGCGTTCGTTCTGATCCTTTTCGTGCTCGCCATC
                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Francois
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98GB-00026753
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/*tag= c
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177. .314
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157. .446
/*tag= d
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note= "contains 1 intron; no termination codon"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
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                                                                                                                                          <u>.</u>
                                                                                                                                        Score 446; DB 3; 1
Pred. No. 9.9e-113;
); Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         De Bolle MFC,
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121 TTTTATGTGTTCTGACAAGTTGCAAATATTGAGTAGATATCGCATCCGTTAGTGGAGAAC

180 120

0

TCAGGTTATCAAATCTTTAGTTCATTTATTGAATATGATAGTATTTATATTCTTTTATGG

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RESULT 3
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Dahlia merckii.
                                                                                                                                                                         WPI; 2000-246564/21.
P-PSDB; AAY84059.
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04-DEC-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          02-MAR-2000.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Antimicrobial protein; AMP1; transgenic plant; linker propeptide; protein expression; plant defensin; RsAFP2; antifungal protein; AFP2;
                                              Example 2; Fig 11; 151pp; English
                                                                                            Improving expression of polyproteins in plants involves coexpression of two or more proteins in plants within a single transcription unit.
                                                                                                                                                                                                                                               Broekaert WF, Francois IEJA,
                                                                                                                                                                                                                                                                                                                                                                                                                         17-AUG-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO200011175-A1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DNA encoding a fusion protein of DmAMP1 and RsAFP2.
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                                                                                                                                                                                                                                                                                                (ZENE ) ZENECA
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98GB-00026753
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160. .309
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/note= "encodes DmAMP1"
442. .594
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The present sequence encodes a protein of the invention, comprising the

(ZENE ) ZENECA LTD.

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Dahlia merckii.
Unidentified.
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                                18-AUG-1998;
04-DEC-1998;
                                                                                                                                                                                                                                                                                                         Antimicrobial protein; AMP1; transgenic plant; linker propeptide; protein expression; plant defensin; RsAFP2; antifungal protein; AFP2;
                                                                                                                                                                                                                                                                                                                                                          DNA encoding a fusion protein of DmAMP1 and RsAFP2.
                                                                                                                                                                                                                                                                                                                                                                                          03-JUL-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAZ99336 standard; DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 606 BP; 189 A; 136 C; 137 G; 144 T; 0 U; 0 Other;
                                                                              17-AUG-1999;
                                                                                                           02-MAR-2000.
                                                                                                                                         WO200011175-A1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTGTGGCAATACGGGACATTGTGACAACCAATGTAAATCATGGGAGGGTGCGGCCCATGG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCAAAAGCTTGACCGTGATGCCAAGAAAGTGGTTCCAAACGTTGAACATCCG 446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGAAAAGCTTGCTCAAGACAAACTTAAAGCCGGAACAACTCGCTCAAGACAAACTTAATGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGATATCGCATCCGTTAGTGGAGAACTATGCGAGAAAGCTAGCAAGACGTGGTCGGGCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCAAAAGCTTGACCGTGATGCCAAGAAAGTGGTTCCAAAACGTTGAACATCCG 429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CGANANGCTTGCTCAAGACAAACTTAAAGCCGAACAACTCGCTCAAGACAAACTTAATGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGCGTGTCATGTGCGTAACGGGAAACACATGTGTTTCTGTTACTTCAATTGTAAAAAAAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTGTGGCAACACGGGACATTGTGACAACCAATGTAAATCATGGGAGGGTGCGGCCCATGG
                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                98GB-00018001.
98GB-00026753.
                                                                            99WO-GB002716
                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                     /product= "fusion protein of DmAMP1 and RsAFP2"
                                                                                                                                                                                     *tag=
                                                                                                                                                                                                   . 548
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 287.2; DB 3
Pred. No. 6.1e-69;
0; Mismatches 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                     ВP
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RESULT 5
AAZ51396
ID AAZ5
XX AAZ5
XX AAZ5
XX O6-J
DT O6-J
XX Anti
KW Anti
KW Aptl
OS Dahl
OS Synt
XX Synt
XX KY
FT CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The present sequence encodes a protein of the invention, comprising the mature proteins of the plant defensins, the Dahlia antimicrobial protein C (AMP) 1 and the antifungal protein 2 (RBAFP2), linked by a linker propeptide of the invention. The specification describes methods for 1 improving expression levels of one or more proteins in a transgenic plant. The method comprises inserting a DNA sequence having a promoter region operably linked to two or more protein encoding regions separated by a DNA sequence coding for a linker propeptide and a terminator region. The method is used to produce proteins in plants. The linker propeptide comprising a cleavage site, whereby the expressed polyprotein is post-translationally processed into the component protein molecules. The propeptide sequence is rich in amino acids A, V, S and T and contains calipeptidic sequences consisting of either two acidic, two basic or one acidic and one basic residue as a cleavable linker sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local S
Matches 287
                                                                                                                                                                 Antimicrobial protein; DmAMP; transgenic bacteria; fungi; field crop; fruit; veget apple; plant transformation vector; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Improving expression two or more proteins
                                                                                                 Synthetic.
                                                                                                                         Dahlia merckii.
                                                                                                                                                                                                                                                                     Portion
                                                                                                                                                                                                                                                                                                                    06-JUN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                AAZ51396 standard; DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Disclosure; Fig 31; 151pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Broekaert WF,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2000-246564/21.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              155 AGATATCGCATCCGTTAGTGGAGAAACTATGCGAGAAAGCTAGCAAGACATGGTCGGGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    287;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CGAAAAGCTTGCTCAAGACAAACTTAAAGCCGAACAACTCGCTCAAGACAAACTTAATGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGCGTGTCATGTGCGTAACGGGAAACACATGTGTTTCTGTTACTTCAATTGTAAAAAAGC
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                                                                                                                                                                                                                                                                pFAJ3106 encoding
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BP; 164 A; 122 C; 143 G;
                                                                                                                                                                                                                                                                                                                    (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Francois
Location/Qualifiers
76. .525
/*tag= a
                                                                                                                                                                                                                                                                                                                  entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                ВP
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Pred. No. 4.5e-68;
0; Mismatches 5
                                                                                                                                                                                                                                                                  Dahlia merckii antimicrobial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    De
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                                                                                                                                                                         vegetable;
ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              128 T; 0 U; 0 Other;
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single
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                                                                                                                                                                                               canola;
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                                                                                                                                                                                                                      microbial infection
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 557;
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                                                                                                                                                                                               banana;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ray
                                                                                                                                                                                                                                                                     protein.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   356
                                                                                                                                                                                               sunflower;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               O.F
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  ARSSULT 6
ARAZ99325
ID ARAZ9
XX ARAZ9
XX ARAZ9
XX DNA
DE DNA
DNA
DE DNA

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
Matches 217; Conserv
                                                                                            Synthetic.
Dahlia merckii.
Unidentified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The present sequence corresponds to the region between XhoI and SacI sites of plant transformation vector pRAJ3106, which encompass the codir region for Dahlia merckii antimicrobial protein, Dm-AMPI. The vector is useful in the production of transgenic plants which show improved resistance to infections by microorganisms such as bacteria and fungi. Transgenic plants include e.g. field crops, fruits and vegetables, such as canola, sunflower, tomato, apple, banana, pear and mango
                                                                                                                                                                                             protein
                                                                                                                                                                                                                      Antimicrobial
                                                                                                                                                                                                                                                             DNA encoding
                                                                                                                                                                                                                                                                                                                  03-JUL-2000
                                                                                                                                                                                                                                                                                                                                                                 AAZ99325
                                                                                                                                                                                                                                                                                                                                                                                                              AAZ99325
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Example 3; Fig 7; 77pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Polynucleotide sequences and expression products useful for producing transgenic plants that are resistant to microbial infections.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                18-AUG-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               17-AUG-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            02-MAR-2000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (ZENE ) ZENECA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   318
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       138 AGATATCGCATCCGTTAGTGGAGAACTATGCGAGAAAGCTAGCAAGACGTGGTCGGGCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  155 AGATATCGCATCCGTTAGTGGAGAAACTATGCGAGAAAGCTAGCAAGACATGGTCGGGAAA
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                                                                                                                                                                                          expression;
                                                                                                                                                                                                                                                                                                                                                                                                              standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGAAAAGCTTGCTCAAGACAAACTTAAAGCCGAACAACTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGAAAAGCTTGCTCAAGACAAACTTAAAGCCGAACAACTC 374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTGTGGCAATACGGGACATTGTGACAACCAATGTAAATCATGGGAGGGTGCGGCCCATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGCGTGTCATGTGCGTAACGGGAAACACATGTGTTTCTGTTACTTCAATTGTAAAAAAAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                  Ø
                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                          protein; AMP1; transgenic plant; linker propeptide;
ssion; plant defensin; RsAFP2; antifungal protein; A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LID.
                                                                                                                                                                                                                                                                fusion
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                      Location/Qualifiers 76. .522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /product= "Antimicrobial protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         48.3%;
                                                                                                                                                                                                                                                                  protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 215.2; DB Pred. No. 4e-49;
                                                                                                                                                                                                                                                                of DmAMP1
                                                                                                                                                                                                                                                                  and
                                                                                                                                                                                                                                                                  ReAFP2
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Length Indels

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                                                                                           RESULT 7
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                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
Matches 217; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Improving expression of
two or more proteins in
 03-JUL-2000
                                 AAZ99335;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 534 BP; 164 A; 118 C; 122 G; 130 T; 0 U; 0 Other;
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04-DEC-1998;
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                                                              AAZ99335 etandard; DNA; 485
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                                                                                                                                                              CGAAAAGCTTGCTCAAGACAAACTTAAAGCCGAACAACTC 374
                                                                                                                                                                                                                                                                                   CTGTGGCAATACGGGACATTGTGACAACCAATGTAAATCATGGGAGGGTGCGGCCCATGG
                                                                                                                                                                                                                                                                                                                                             AGATATCGCATCCGTTAGTGGAGAACTATGCGAGAAAGCTAGCAAGACATGGTCGGGAAA
                                                                                                                                                                                                                                AGCGTGTCATGTGCGTAACGGGAAACACATGTGTTTCTGTTACTTCAATTGTAAAAAAGC 334
                                                                                                                                                                                                                                                               CTGTGGCAACACGGGACATTGTGACAACCAATGTAAATCATGGGAGGGTGCGGCCCATGG
                                                                                                                                                                                                                                                                                                                          AGATATCGCATCCGTTAGTGGAGAACTATGCGAGAAAGCTAGCAAGACGTGGTCGGGCAA
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 (first entry)
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98GB-00026753
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370. .538
/*tag= c /notes "encodes RsAFP2"
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Pred. No. 4e-49;
0; Mismatches
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Best Local Similarity
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                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The present sequence encodes a protein of the invention, comprising the mature proteins of the plant defensins, the Dahlia antimicrobial protein (AMP) 1 and the antifungal protein 2 (RSAFP2), linked by a linker propeptide of the invention. The specification describes methods for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Antimicrobial protein; AMP1; transgenic plant; linker propeptide; protein expression; plant defensin; RsAFP2; antifungal protein; AFP2; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Disclosure;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2000-246564/21.
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04-DEC-1998;
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Unidentified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DNA encoding a fusion protein of DmAMP1 and RsAFP2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           17-AUG-1999;
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;wo or more proteins
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                                                                                              AGCGTGTCATGTGCGTAACGGGAAACACATGTGTTTCTGTTACTTCAATTGTAAAAAAAGC
                                                                                                                                                                                                                                AGATATCGCATCCGTTAGTGGAGAACTATGCGAGAAAGCTAGCAAGACATGGTCGGGAAA
                                                                                                                                                                                                                                                                                                                           485 BP; 139
                   CGAAAAGCTTGCTCAAGACAAACTTAAAGCCGAACAACTC
                                   CGAAAAGCTTGCTCAAGACAAACTTAAAGCCGAACAACTC
                                                                            AGCGTGTCATGTGCGTAACGGGAAACACATGTGTTTCTGTTACTTCAATTGTAAAAAAGC
                                                                                                                                        CTGTGGCAACACGGGACATTGTGACAACCAATGTAAATCATGGGAGGGTGCGGCTCACGG
                                                                                                                                                                   CTGTGGCAATACGGGACATTGTGACAACCAATGTAAATCATGGGAGGGTGCGGCCCATGG
                                                                                                                                                                                                     AGATATCGCATCCGTTAGTGGAGAACTATGCGAGAAAGCTAGCAAGACGTGGTCGGGCAA
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                                                                                                                                                                                                                                                               Conservative
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98GB-00026753
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       151pp; English.
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97.7%;
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                                                                                                                                                                                                                                                                                                                          A; 104 C; 128 G; 114 T; 0 U; 0 Other;
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Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                  EST, expressed sequence tag or an EST contig) encoding a plant defensin or its mature form, or the complement of them. Also included are a DNA construct comprising the novel nucleic acid (operably linked to a promoter that drives expression in a host cell), an expression cassette comprising the DNA construct, a host cell having stably incorporated into its genome the DNA construct, an isolated polypeptide and impacting a plant pathogen e.g. soybean cyst nematode (Sclerotinia sclerotiorum). The nucleic acid construct is useful for preparing a composition for treating fungal infections, e.g. Candidiasis. The present sequence is either an EST (expressed sequence tag) or an EST contig encoding a plant defensin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ironweed; ss; EST; expressed sequence tag; defensin; soybean cyst nematode; pesticide; plant; plant pathogen; sclerotinia sclerotiorum; fungal infection; Candidiasis.
                                                                                                                                                                                                                                                                                                                        Sequence 529 BP; 178 A; 88 C; 111 G; 148 T; 0 U; 4 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               New nucleic acid molecule, useful for preparing a composition treating fungal infections, e.g. Candidiasis.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2003-851760/79.
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                                                                                                                                                                                                                                                                                                                                                         its mature form.
                                                                                                                             138
                                                                                                                                                                                                              155 AGATATCGCATCCGTTAGTGGAGAACTATGCGAGAAAGCTAGCAAGACATGGTCGGGAAA
                                                                                                                                                                                             78
TGAAAAACTCGCTCAAGATAAGCTAAAAGCAGAAGAGCTTGCTAAAGACAAACTCAAGGC
                              CGAAAAGCTTGCTCAAGACAAACTTAAAGCCGAACAACTCGCTCAAGACAAACTTAATGC
                                                                                              AGCGTGTCATGTGCGTAACGGGAAACACATGTGTTTCTGTTACTTCAATTGTAAAAAAGC
                                                                                                                                                       CTGTGGCAATACGGGACATTGTGACAACCAATGTAAATCATGGGAGGGTGCGGCCCATGG
                                                                                                                                                                                          AGAAATCTCGAGTGTGAGAGCAGAGCTATGCGAGAAAGCTAGCAAGACATGGTCAGGCAA
                                                              AGCTTGTCATGTGCGTGGAGGGAAACACATGTGCTTTTGTTATTTCAATTGTAAAAAAAGC
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                                                                                                                                                                                                                                                           Conservative
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82.5%;
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                                                                                                                                                                                                                                                                          Score 209.4; DB 11; Pred. No. 1.6e-47;
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                                                                                                                                                                                                                                                                                                                                               Best Local Sim Matches 236;
                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The invention relates to an isolated nucleic acid molecule (either an EST, expressed sequence tag or an EST contig) encoding a plant defensin or its mature form, or the complement of them. Also included are a DNA construct comprising the novel nucleic acid (operably linked to a promoter that drives expression in a host cell), an expression cassette comprising the DNA construct, an isolated polypeptide and impacting a plant pathogen e.g. soybean cyst nematode (Sclerotinia sclerotiorum). The nucleic acid construct is useful for preparing a composition for treating fungal infections, e.g. Candidiasis. The present sequence is either an EST (expressed sequence tag) or an EST contig encoding a plant defensin
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 579 BP; 198 A; 97 C; 117 G; 167 T; 0 U; 0 Other;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        New nucleic acid molecule, useful for preparing treating fungal infections, e.g. Candidiasis.
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                                                                                                               152
                                                                                                                                                                                                                                                                155 AGATATCGCATCCGTTAGTGGAGAAACTATGCGAGAAAGCTAGCAAGACATGGTCGGGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     318 AGATAAGTTTGACCATGATGCAAAAGAAGTAGTACCAAATGTCGAACATCC 368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           395
                                                                                                                                                                                                                                  92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           mature form.
                                                                                                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                CTGTGGCAATACGGGACATTGTGACAACCAATGTAAATCATGGGAGGGTGCGGCCCATGG
                                       AGCGTGTCATGTGCGTAACGGGAAACACATGTGTTTCTGTTACTTCAATTGTAAAAAAGC
                                                                                                                                                                                                                               AGAAATCTCGAGTGTGAGAGCAGAGCTATGCGAGAGAGCTAGCAAGACATGGTCAGGCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCAAAAGCTTGACCGTGATGCCAAGAAAGTGGTTCCAAACGTTGAACATCC 445
                                                                                                               CTGTGGCAACACAGGACATTGTGATAATCAGTGTAAGTCATGGGAGGGTGCAGCCCATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Herrmann R, A, Weng Z;
                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CDNA; 579
                                                                                                                                                                                                                                                                                                                                                                       45.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            INT INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Lu AL,
                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                       Score 203; DB 11;
Pred. No. 9.5e-46;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ВP
                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mccutchen BF, Miao G,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              #
                                                                                                                                                                                                                                                                                                                                                  55;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         D
                                                                                                                                                                                                                                                                                                                                                                                                  Length 579;
                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         composition
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Presnail JK;
                                                                                                                                                                                                                                                                                                                                                  <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            for
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271
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 10
Query Match
Best Local Similarity
Matches 234; Conser
                                                                       The present sequence is a Dahlia merckii cDNA encoding an antimicrobial preproprotein Dm2.5. This sequence is useful in the production of transgenic plants which show improved resistance to infections by microorganisms such as bacteria and fungi. Transgenic plants include e. field crops, fruits and vegetables, such as canola, sunflower, tomato,
                                                                                                                                                               Polynucleotide sequences and expression products useful for producing transgenic plants that are resistant to microbial infections.
                                                                                                                                                                                                                                Evans IJ,
                                                                                                                                                                                                                                                                                                                                                                                                  misc_feature
                                                                                                                                          Claim 1; Fig 3; 77pp; English.
                                                                                                                                                                                                             WPI;
                                                                                                                                                                                                                                                                             18-AUG-1998;
                                                                                                                                                                                                                                                                                                   17-AUG-1999;
                                                                                                                                                                                                                                                                                                                         02-MAR-2000.
                                                                                                                                                                                                                                                                                                                                               WO200011196-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                    mat_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                          sig_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Dahlia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       microbial infection;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Dahlia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              06-JUN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAZ51378
                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Antimicrobial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAZ51378 standard;
                                                                                                                                                                                                                                                        (ZENE ) ZENECA
                                                                                                                                                                                                  2000-237658/20.
DB; AAY70314.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                335
                                                               banana, pear and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        merckii
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        merckii antimicrobial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           banana;
                                           577
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCAAAAGCTTGACCGTGATGCCAAGAAAGTGGTTCCAAACGTTGAACATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGATAAGTTTGACCATGATGCAAAAGAAGTAGTACCAAATGTCGAACATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGAAAAACTCGCTCAAGATAAGTTAAAAGCTGAAGAGCTTGCAAAAGACAAAACTCAAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ССВАВАВСТТССТСВАСВАСАВАСТТВАВССССВАВСТССВСТСВАСВАВСТВАВССТВАТСС 394
                                                                                                                                                                                                                                 Ray JA;
 Conservative
                                          BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           protein; DmAMP; Dm2.5; transgenic plant; ection; bacteria; fungi; field crop; fruia; sunflower; apple; ss.
                                                                                                                                                                                                                                                                             98GB-00018003
                                                                                                                                                                                                                                                                                                   99WO-GB002720
                                                                                                                                                                                                                                                                                                                                                                                                    /product=
254. .343
                                           178
                                                                                                                                                                                                                                                                                                                                                                /*tag= d
/note= "Encodes protein which may be used as cleavable
linker in the co-expression of multiple proteins"
                                                                                                                                                                                                                                                                                                                                                                                                                         104. .253
/*tag= c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /product= "Antimicrobial protein Dm2/note= "Preproprotein"
                                                                                                                                                                                                                                                                                                                                                                                                                                              *tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            . 103
          39.7%;
                                         A, 96 C;
                                                                mango
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          577
                                                                                                                                                                                                                                                                                                                                                                                                                "Mature
0
Score 177.2; DB 3
Pred. No. 1.2e-38;
0; Mismatches 28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ВP
                                          140 G;
                                                                                                                                                                                                                                                                                                                                                                                                                Dm2
                                          163 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Dm2.5 cDNA
                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                               protein"
                   DB 3;
                   Length 577;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       fruit; vegetable;
Indels
30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               382
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Gaps
                                                                                     e.g
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RESULT 11
AAZ99333
ID PAS99333
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAZ99333
                                                                                                                                                                                                                                                   Improving expression
two or more proteins
                                                                                                                                                                                                                                                                                                                                                                                     Broekaert WF,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      18-AUG-1998;
04-DEC-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             02-MAR-2000.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Dahlia merckii.
Unidentified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       protein expression;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Antimicrobial
                                                                                                                                                                                                                                                                                                                     P-PSDB;
                                                                                                                                                                                                                                                                                                                                           WPI; 2000-246564/21.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    17-AUG-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO200011175-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                               (ZENE )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              encoding a fusion protein of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          262
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           202
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  82
                                                                                                                                                                                                                                                                                                                       AAY84066.
                                                                                                                                                                                                                                                                                                                                                                                                                               ZENECA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGCGTGTCATGTGCGTAACGGGAAACACATGTGTTTCTGTTACTTCAATTGTAAAAAAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCAAGAGCTTGACCGTGATGCCAAGAAAGTGATTCCGAACGTTGAACATCCG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTGTGGCAACACGGGACACTGTGACAACCAATGTAAATACTGGGAGGGGGGGCCCCATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTGTGGCAATACGGGACATTGTGACAACCAATGTAAATCATGGGAGGGTGCGGCCCATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGATATCGCATCCGTTAGTGGAGAACTATGCGAGAAAGCTAGCAAGACATGGTCGGGAAA
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                                                                                                                                                                                                                                                                                                                                                                                   Francois
                                                                                                                                                                                                                                                                                                                                                                                                                               LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    98GB-00018001
98GB-00026753
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    99WO-GB002716
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /*tag= a
/product=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .476
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     in; AMP1; transgenic plant; linker propeptide;
plant defensin; RsAFP2; antifungal protein; A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              entry
                                                                                                                                                                                                                                                        in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    485
                                                                                                                                                                                                                                                        polyproteins : plants within
                                                                                                                                                                                                                                                                                                                                                                                     IEJA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "fusion
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                                                                                                                                                                                                                                                                                                                                                                                     De
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                                                                                                                                                                                                                                                                                                                                                                                     Bolle MFC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              protein
                                                                                                                                                                                                                                                        in plants
n a single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DmAMP1
                                                                                                                                                                                                                                                                                                                                                                                     Evans IJ,
                                                                                                                                                                                                                                                        involves coexpression transcription unit.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 and
                                                                                                                                                                                                                                                                                                                                                                                     Ray
                                                                                                                                                                                                                                                                                                                                                                                     JA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AFP2;
                                                                                                                                                                                                                                                                                õ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           88
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        274
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The present sequence encodes a protein of the invention, comprising the mature proteins of the plant defensing. He Dahlia antimicrobial protein (AMP) 1 and the antifungal protein 2 (AFP2), linked by a linker propeptide of the invention. The specification describes methods for improving expression levels of one or more proteins in a transgenic plant. The method comprises inserting a DNA sequence having a promoter region operably linked to two or more protein encoding regions separated by a DNA sequence coding for a linker propeptide and a terminator region.

The method

is used to

produce proteins

plants.

propeptide

Disclosure; Fig 28; 151pp; English.

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AZ299329
ID AAZ2
XX
AC AAZ2
AC AAZ2
XX
DA DNA
XX
CDS
FT
CDS
FT
CDS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ភភភភភន្ត្
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local
Improving expression two or more proteins
                                                                                                                                                                                                                                                18-AUG-1998;
04-DEC-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                comprising a cleavage site, whereby the expressed polyprotein is post-
translationally processed into the component protein molecules. The
propeptide sequence is rich in amino acids A, V, S and T and contains
dipeptidic sequences consisting of either two acidic, two basic or one
acidic and one basic residue as a cleavable linker sequence
                                                                       WPI; 2000-246564/21.
P-PSDB; AAY84062.
                                                                                                                                               Broekaert WF,
                                                                                                                                                                                                                                                                                                                        17-AUG-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                         WO200011175-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Synthetic.
Dahlia merckii.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Antimicrobial protein; AMP1; transgenic plant; linker propeptide; protein expression; plant defensin; RsAFP2; antifungal protein; AFP2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       03-JUL-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAZ99329 standard; DNA; 446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DNA encoding a fusion protein of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAZ99329;
                                                                                                                                                                                                (ZENE )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             392 TG 393
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           206;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               65
                                                                                                                                                                                                ZENECA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGAGGAAGCTGCTGCTATTCCTGAAGCTTCTGAAGAACTTGCTCAAGAAGAAGCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGAAAAGCTTGCTCAAGACAAACTTAAAG----CCGAACAACTCGCTCAAGACAAACTTAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGCGTGTCATGTGCGTAACGGGAAACACATGTGTTTCTGTTACTTCAATTGTGCTAACGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTGTGGCAACACGGGACATTGTGACAACCAATGTAAATCATGGGAGGGTGCGGCTCACGG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            485
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                  LTD.
                                                                                                                                                  Francois
                                                                                                                                                                                                                                                98GB-00018001
98GB-00026753
                                                                                                                                                                                                                                                                                                                           99WO-GB002716
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
3. .437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /*tag= a
/product= "fusion protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               38.8%;
  óf
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polyproteins in plants involves coexpression plants within a single transcription unit.
                                                                                                                                               IEJA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ВP
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 173.2;
Pred. No. 1.5
                                                                                                                                                  De
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DmAMP1 and RsAFP2
                                                                                                                                               Bolle MFC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .5e-37;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        of DmAMP1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        33;
                                                                                                                                                  Evans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0 Other;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        and
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                                                                                                                                               Ray
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18-AUG-1998; 04-DEC-1998; 17-AUG-1999; 02-MAR-2000 WO200011175-A1.

98GB-00026753 98GB-00018001 99WO-GB002716

/\*tag= a /product= "fusion protein of plant defensins"

Location/Qualifiers

/\*tag= .1085

(ZENE ) ZENECA

LTD.

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RESULT 13
AAZ99334
ID AAZ99334
AC AAZ99
XX AAZ99
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
Matches 180; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            improving expression levels of one or more proteins in a transgenic plant. The method comprises inserting a DNA sequence having a promoter region operably linked to two or more protein encoding regions separated by a DNA sequence coding for a linker propeptide and a terminator region. The method is used to produce proteins in plants. The linker propeptide comprising a cleavage site, whereby the expressed polyprotein is post-translationally processed into the component protein molecules. The propeptide sequence is rich in amino acids A, V, S and T and contains dipeptidic sequences consisting of either two acidic, two basic or one acidic and one basic residue as a cleavable linker sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Synthetic.
Dahlia merckii.
Unidentified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The present sequence encodes a protein of the invention, comprising the mature proteins of the plant defensins, the bahla antimicrobial protein (AMP) 1 and the antifungal protein 2 (APP2), linked by a linker propeptide of the invention. The specification describes methods for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Antimicrobial protein; AMP1; transgenic plant; linker propeptide; protein expression; plant defensin; RBAFP2; antifungal protein; AFP2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DNA encoding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  03-JUL-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAZ99334
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 446 BP; 111 A; 102 C; 123 G; 110 T; 0 U;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Disclosure;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        335
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   fusion protein of DmAMP1, RSAFP2,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              24; 151pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           38.6%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 172.2; DB 3
Pred. No. 2.7e-37;
0; Mismatches 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    13;
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Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          plant. The method comprises inserting a DNA sequence having a promoter region operably linked to two or more protein encoding regions separated by a DNA sequence coding for a linker propeptide and a terminator region. The method is used to produce proteins in plants. The linker propeptide comprising a cleavage site, whereby the expressed polyprotein is post-translationally processed into the component protein molecules. The propeptide sequence is rich in maino acids A, V, S and T and contains dispetidic sequences consisting of either two acidic, two basic or one acidic and one basic residue as a cleavable linker sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The present sequence encodes a protein of the invention, comprising the mature proteins of the plant defensins, the Dahlia antimicrobial protein (AMP) 1, antifungal protein 2 (RARP2), HBAFP1, and AceAMP1, linked by linker propeptides of the invention. The specification describes methods for improving expression levels of one or more proteins in a transgenic for improving expression levels of one or more proteins in a transgenic
                                                                                                                                 Antimicrobial protein; AMP1; transgenic plant; linker propeptide; protein expression; plant defensin; RsAFP2; antifungal protein; AFP2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 2000-246564/21.
P-PSDB; AAY84067.
                                                                  Dahlia merckii.
Unidentified.
                                                                                                   Synthetic.
                                                                                                                                                                                  DNA encoding a fusion protein of DmAMP1 and RsAFP2.
                                                                                                                                                                                                                       03-JUL-2000
                                                                                                                                                                                                                                                                                      AAZ99324 standard; DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Disclosure; Fig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Improving expression two or more proteins
                 misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 1093 BP; 278 A; 271 C; 287 G; 257 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Broekaert WF,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                         245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  155 AGATATCGCATCCGTTAGTGGAGAACTATGCGAGAAAGCTAGCAAGACATGGTCGGGAAA 214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               204;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGAAAAGCTTGCTCAAGACAAACTTAAAG----CCGAACAACTCGCTCAAGACAAACTTAA 391
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTGTGGCAACACGGGACATTGTGACAACCAATGTAAATCATGGGAGGGTGCGGCTCACGG
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                                                                                                                                                                                                                                                                                                                                                                                                        TG 393
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                                                                                                                                                                                                                     (first
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      29; 151pp; English.
                 Location/Qualifiers
160. .309
                                                                                                                                                                                                                     entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               38.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    of polyproteins in in plants within a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IEJA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 170; DB 3; Length 1093; Pred. No. 1.5e-36; 0; Mismatches 35; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          De Bolle MFC,
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RESULT 15
AAA54387
ID AAA54
XX
AC AAA54
XX
DT 11-AE
XX
DE Plant
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Plant defensin coding sequence. 11-APR-2001 (first entry) AAA54387 standard; DNA; 460

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Best Local Similarity
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                                                                                                                                                                                                                                                                                                              Sequence 522 BP; 147
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P-PSDB; AAY84057.
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04-DEC-1998;
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318 TG 319
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                                                                                    AGCGTGTCATGTGCGTAACGGGAAACACATGTGTTTCTGTTACTTCAATTGTAAAAAAAGC
                                                            AGCGTGTCATGTGCGTAACGGGAAACACATGTGTTTCTGTTACTTCAATTGTTCCAACGC
                                                                                                                         CTGTGGCAACACGGGACATTGTGACAACCAATGTAAATCATGGGAGGGTGCGGCCCATGG
                                                                                                                                                       CTGTGGCAATACGGGACATTGTGACAACCAATGTAAATCATGGGAGGGTGCGGCCCATGG
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                                                                                                                                                                                                                   AGATATCGCATCCGTTAGTGGAGAACTATGCGAGAAAGCTAGCAAGACATGGTCGGGAAA
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                             336
                                                                                                                                                                                                                                                   Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       98GB-00018001.
98GB-00026753.
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358. .510
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/note= "encodes RsAFP2"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               of polyproteins in plants involves coexpression of in plants within a single transcription unit.
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Pred. No. 1.
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                                                                                                                                                                                                                                                   Mismatches
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                                                                                                                                                                                                                                                                                DB 3;
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                                                                                                                                                                                                                                                                                Length 522;
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Search completed: March 18, Job time: 388 secs
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                                                                                                                                                                                                                                                                                                                                                 Query Match 37.8%; Score 168.6; DB 5; Length 460; Best Local Similarity 81.6%; Pred. No. 2.6e-36; Matches 195; Conservative 0; Mismatches 44; Indels 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Nucleotides encoding plant defensins can be used to create transgenic plants in which plant defensin polypeptides are present at higher or lower levels than normal, or in cell types or developmental stages in which they are not normally found. This has the effect of altering the level of disease (e.g. fungal) resistance and stress tolerance in those cells. The defensin polypeptides are useful for immunising animals to produce polyclonal or monoclonal antibodies. These antibodies are useful for screening cDNA expression libraries to isolate full-length plant defensin cDNA clones
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim 2; Page 37; 50pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Isolated polynucleotides encoding plant defensins, useful for creating transgenic plants with higher or lower levels of defensin polypeptides, especially for increasing disease (e.g. fungal) resistance and stress
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CDS
                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 460 BP; 160 A; 83 C; 102 G; 115 T; 0 U; 0 Other;
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P-PSDB; AAB04046.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Defensin; disease; fungus; resistance; transgenic plant; vaccine; immunisation; antibody; crop protection; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    tolerance.
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                                                                                                     335 CGAAAAGCTTGCTCAAGACAAACTTAAAGCCGAACAACTCGCTCAAGACAAACTTAATG 393
                                                                                                                                      207 TGCGTGTCATGTGCGTGGGGAAACACATGTGCTTCTGCTACTTCAATTGTAAAGAAGC
                                                                                                                                                            275 AGCGTGTCATGTGCGTAACGGGAAACACATGTGTTTCTGTTACTTCAATTGTAAAAAAGC
                                                                                                                                                                                                                                215 CTGTGGCAATACGGGACATTGTGACAACCAATGTAAATCATGGGAGGGTGCGGCCCATGG
                                                                                                                                                                                                                                                                                                  155 AGATATCGCATCCGTTAGTGGAGAACTATGCGAGAAAGCTAGCAAGACATGGTCGGGGAAA
                                                                                                                                                                                                                                                                              87
                                                                    CGAAAAGCTTGCCCAAGACAAGCTCAACGCTGAAAAATTCGGCCGTGATGACGTTAAAG
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                                                                                                                                                                                                                                                                              AGAMATCGCGACTGTGAGAAGTGCACTATGTGAGAAAGCTAGCAAGACATGGTCAGGCAA 146
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25. .351
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/product= "Plant defensin"
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                2005, 13:52:15
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Result
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Maximum Match 100%
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Maximum DB seq length: 2000000000
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Perfect score:
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3: gb_in:*
4: gb_ou:*
5: gb_ou:*
6: gb_pat:*
8: gb_ph:*
9: gb_pr:*
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1 atggtgaatcggtcggttgc.....ttccaaacgttgaacatccg
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Match Length DB
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## ALIGNMENTS

LOCUS  BD223232  BD223232  BD223232  BD223232  Method of genetic expression of polyprotein in plant.  BD223232  VERSION  BD223232  VERSION  BD223232  BD223232  A46 bp DNA linear PAT 17-JUL  BD223232  VERSION  BD223232  AUCCESSION  BD223232  BD223232  BD233232  AUCCESSION  BD223232  BD233232  BD233232  BD233232  AUCCESSION  BD223232  BD233232  BD233232  BD233232  BD233232  BD23323  BD233232  BD23322  BD233232  BD232322  BD233232  BD23323  BD233232  BD233232  BD233232  BD233232  BD233232  BD233232  BD232322  BD233232  BD23322  BD2322  BD23222  BD23222  BD23222  BD23222  BD23222  BD23222  BD23222	/organism="Dahila merckii" /mol_type="genomic DNA" /dh xref="raxon.43367"	
BD223232  BD223232  BD223232  BD223232.1 GI:3303002  JP 2002523047-A/1.  Dahlia merckii (bedding dahlia)  Dahlia merckii (bedding dahlia)  Dahlia merckii (sempanulids; Streptophyta; Embryophyta; Evaryota; Viridiplantae; Streptophyta; Embryophyta; Spermatophyta; Magnoliophyta; eudicotyledons; Core e asterids; campanulids; Asterales; Asteraceae; Astera Coreopsideae; Dahlia.  1 (bases 1 to 446)  Broekaert, W.F., Francois, I.E.J.A., Bolle, M.F.C.D., E Ray, J.A.  Method of genetic expression of polyprotein in plant Patent: JP 2002523047-A/1  PD 30-JUL-2002  PF 17-AUG-1999 JP 2000556429  PF 18-AUG-1998 GB 9818001.1,04-DEC-1998 GB WILLEM FRANCOIS, PI MIGUEL FRANCESCO COLETA DE BOLLE, IAN JEFFREY EV ANTHONY RAY  PC C12N15/09, A01H1/00, C07K1/12, C12N5/10, C12P21/02, C12R1:91)  CC Method of genetic expression of polyprotein in Location/Qualifiers FT CDS (13.164)  (157). (446)	<b></b>	FEATURES Bou
BD223232  BD223232  BD223232  BD223232.1 GI:3303002  JP 2002523047-A/1.  Dahlia merckii (bedding dahlia)  Dahlia merckii (bedding dahlia)  M Dahlia merckii (wagnoliophyta; eudicotyledons; core e asterids; campanulids; Asterales; Asteraceae; Asteraceae; Asteraceae; Dahlia.  1 (bases 1 to 446)  Broekaert, W.F., Francois, I.E.J.A., Bolle, M.F.C.D., E Ray, J.A.  Method of genetic expression of polyprotein in plant patent: JP 2002523047-A 1 30-JUL-2002; SYNGENTA LTD  SYNGENTA LTD  OS Dahlia merckii PN JP 2002523047-A 1 30-JUL-2002; PT 17-AUG-1998 GB 9818001.1,04-DEC-1998 GB WILLEM FRANCOIS,  PI MIGUEL FRANCOIS,  PI MIGUEL FRANCOSCO COLETA DE BOLLE, IAN JEFFREY EV ANTHONY RAY PC C12N15/09, A01H1/00, C07K1/12, C12N5/10, C12P21/02/C12R1:91)  CC Method of genetic expression of polyprotein in Location/Qualifiers  FT CDS  (1) . (64)	CDS	
BD223232  Method of genetic expression of polyprotein in plant BD223232  BD223232.1 GI:33033002  JP 2002523047-A/1.  Dahlia merckii (bedding dahlia)  Mahlia merckii (bedding dahlia)  Mahlia merckii (bedding dahlia)  Mahlia merckii (bedding dahlia)  Mahlia merckii (bedding dahlia)  I (bases ) to 446)  Broepideae; Dahlia.  1 (bases ) to 446)  Broekaert, W.F., Francois, I.E.J.A., Bolle, M.F.C.D., E Ray, J.A.  Method of genetic expression of polyprotein in plant Patent: JP 2002523047-A/1  PN JP 2002523047-A/1  PN JP 2002523047-A/1  PN JP 30-JUL-2002  PF 17-AUG-1998 GB 9818001.1,04-DEC-1998 GB WILLEM FRANG BROEKAERT, ISABELLE ELSA JEANNE AUGUSTINE FRANCOIS,  PI MIGUEL FRANCESCO COLETA DE BOLLE, IAN JEFFREY EV ANTHONY RAY  PC C12N15/09,A01H1/00,C07K1/12,C12N5/10,C12P21/02/  C12R1:91),  CC Method of genetic expression of polyprotein in Location/qualifiers	CDS	
BD223232  BD223232  BD223232  BD223232.1 GI:3303002  JP 2002523047-A/1.  Dahlia merckii (bedding dahlia)  Dahlia merckii (bedding dahlia)  Dahlia merckii (sempanulids; Streptophyta; Embryophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core e asterids; campanulids; Asterales; Asteraceae; Astera (Coreopsideae; Dahlia.  1 (bases 1 to 446)  1 (bases 1 to 446)  Broekaert, W.F., Francois, I.E.J.A., Bolle, M.F.C.D., E Ray, J.A.  Method of genetic expression of polyprotein in plant patent: UP 2002523047-A/1  PN JP 2002523047-B/1  PN JP 2002523047	Location/Qu	
BD223232  BD223232  BD223232  BD223232.1 GI:3303002  JP 2002523047-A/1.  Dahlia merckii (bedding dahlia)  Dahlia merckii (bedding dahlia)  Dahlia merckii (sedding dahlia)  M Dahlia merckii (sempanulide) Asterales; Asteraceae; Asteraceae; Asteraceae; Asteraceae; Dahlia.  1 (bases 1 to 446)  Broekaert, W.F., Francois, I.E.J.A., Bolle, M.F.C.D., E Ray, J.A.  Method of genetic expression of polyprotein in plant patent: JP 2002523047-A/1  PD 30-JUL-2002  PF 17-AUG-1999 JP 2000566429  PF 18-AUG-1999 GB 9818001.1,04-DEC-1998 GB WILLEM FRANCOIS,  PI MIGUEL FRANCESCO COLETA DE BOLLE, IAN JEFFREY EV ANTHONY RAY  PC C12N15/00,011N1/00,C07K1/12,C12N5/10,C12P21/02/  C12N15/00,C12N5/00,(C12N5/00,C12R1:91)	Method of genetic expression of polyprotein in plant	
BD223232  BD223232  BD223232  BD223232. GI:3303002  JP 2002523047-A/1.  Dahlia merckii (bedding dahlia)  Dahlia merckii (bedding dahlia)  M Dahlia merckii (wagnoliophyta; eudicotyledons; core e asterids; campanulids; Asterales; Asteraceae; Astera Coreopsideae; Dahlia.  1 (bases 1 to 446)  Broekaert, W.F., Francois, I.E.J.A., Bolle, M.F.C.D., E Ray, J.A.  Method of genetic expression of polyprotein in plant Patent: JP 2002523047-A/1  PN JP 2002523047-A/1  PD 30-JUL-2002  PF 18-AUG-1999 JP 2000556429  PF 18-AUG-1999 GB 9818001.1,04-DEC-1998 GB WILLEM FRANCOIS,  PI MIGUSSTINE FRANCOIS,  PI MIGUSTINE FRANCOIS,  PI MIGUSTINE FRANCOIS,  PO C12015/09,A01H1/00,C07K1/12,C12N5/10,C12P21/02/	C12N15/00, C12N5/00, (C12N5/00, C12R1:91)	
BD223232  Method of genetic expression of polyprotein in plant BD223232  BD223232.1 GI:33033002  JP 2002523047-A/1.  Dahlia merckii (bedding dahlia)  Mahlia merckii (bedding dahlia)  I (bases (bedding dahlia)  Ray, J.A.  Method of genetic expression of polyprotein in plant patent: JP 2002523047-A 1 30-JUL-2002;  SYNGENTA LTD  OS Dahlia merckii  PN JP 2002523047-A/1  PD 30-JUL-2002  PF 17-AUG-1998 GB 9818001.1,04-DEC-1998 GB WILLEM FRANG BROEKAERT,ISABELLE ELSA JEANNE AUGUSTINE FRANCCIS,  PI MIGUEL FRANCESCO COLETA DE BOLLE,IAN JEFFREY EV ANTHONY RAY  PC C12N1/02 A0141/00 C07K1/12.C12N5/10.C12D21/02/	3	
BD223232  Method of genetic expression of polyprotein in plant BD223232  BD223232. GI:33033002  JP 2002523047-A/1.  Dahlia merckii (bedding dahlia)  Dahlia merckii (bedding dahlia)  Mahlia merckii (bedding dahlia)  Mahlia merckii (bedding dahlia)  Mahlia merckii (bedding dahlia)  Mahlia merckii (bedding dahlia)  I (bases (bit bedding dahlia)  Mahlia merckii (bedding dahlia)  I (bases (bit bedding dahlia)  Broekaert, W.F., Francois, I.E.J.A., Bolle, M.F.C.D., ERAY, J.A.  Method of genetic expression of polyprotein in plant Patent: JP 2002523047-A 1 30-JUL-2002;  SYNGENTA LTD  OS Dahlia merckii  PN JP 2002523047-A/1  PD 30-JUL-2002  PF 17-AUG-1998 GB 9818001.1,04-DEC-1998 GB WILLEM FRANC BROEKAERT, ISABELLE ELSA JEANNE AUGUSTINE FRANCESCO COLETA DE BOLLE, IAN JEFFREY EVENTALES (BITT) (BABELLE ELSA JEANNE AUGUSTINE FRANCESCO COLETA DE BOLLE, IAN JEFFREY EVENTALES (BITT) (BABELLE ELSA JEANNE AUGUST) (BITT) (B	Ħ	
BD223232  Method of genetic expression of polyprotein in plant BD223232  BD223232  BD22332.1 GI:3303002  JP 2002523047-A/1.  Dahlia merckii (bedding dahlia)  Mania merckii (bedding dahlia)  Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Enbryophyta; Spermatophyta; Magnoliophyta; Enbryophyta; Core (asteridas; Campanulida; Asterales; Asteraceae; Asteraceopsideae; Dahlia.  1 (bases 1 to 446)  Broekaert, W.F., Francois, I.E.J.A., Bolle, M.F.C.D., Engy, J.A.  Method of genetic expression of polyprotein in plant Method of genetic expression of polyprotein in plant SyngENTA LTD  OS Dahlia merckii  PN JP 2002523047-A/1  PD 30-JUL-2002  PF 17-AUG-1999 GP 98.80001.1,04-DEC-1998 GB 98.8001.1,04-DEC-1998 GB 98.1001.1,04-DEC-1998 GB 98.1001.1,04-DEC-1998 GB 98.1001.1 (DA-DEC-1998 GB SWILLEM FRANCOIS,	MIGUEL FRANCESCO COLETA DE BOLLE, IAN JEFFREY EVANS, JOHN	
BD223232  BD223232  BD223232  BD223232.1 GI:33033002  JP 2002523047-A/1.  Dahlia merckii (bedding dahlia)  Dahlia merckii (bedding dahlia)  M Dahlia merckii (sedding dahlia)  M Dahlia merckii (sedding dahlia)  M Dahlia merckii (sedding dahlia)  Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Everatophyta; Magnoliophyta; eudicotyledons; core e asterids; campanulids; Asterales; Asteraceae; Asteraceae; Asteraceae; Dahlia.  1 (bases 1 to 446)  Broekaert, W.F., Francois, I.E.J.A., Bolle, M.F.C.D., E Ray, J.A.  Method of genetic expression of polyprotein in plant Patent: JP 2002523047-A/1  PD 30-JUL-2002  PF 17-AUG-1999 JP 2000556429  PF 18-AUG-1998 GB 9818001.1,04-DEC-1998 GB 9  WILLEM FRANS BROEKAERT, ISABELLE ELSA JEANNE	GUSTINE FRANCOIS,	
BD223232  Method of genetic expression of polyprotein in plant BD223232  BD223232.1 GI:3303002  JP 2002523047-A/1.  Dahlia merckii (bedding dahlia)  Dahlia merckii (bedding dahlia)  M Dahlia merckii (bedding dahlia)  Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Ewbryophyta; Ewbryophyta; Ewbryophyta; Ewbryophyta; Ewbryophyta; Ewbryota; Core e asterids; campanulids; Asterales; Asteraceae; Astero Coreopsideae; Dahlia.  1 (bases 1 to 446)  Broekaert, W.F., Francois, I.E.J.A., Bolle, M.F.C.D., E Ray, J.A.  Method of genetic expression of polyprotein in plant syngenta; JP 2002523047-A 1 30-JUL-2002; Dahlia merckii PN JP 2002523047-A/1  PD 30-JUL-2002  PF 17-AUG-1999 GB 9818001.1,04-DEC-1998 GB 5	WILLEM FRANS BROEKAERT, ISABELLE ELSA JEANNE	
BD223232  Method of genetic expression of polyprotein in plant BD223232  BD223232. GI:33033002  JP 2002523047-A/1.  Dahlia merckii (bedding dahlia)  Mahlia merckii (bedding dahlia)  Mahlia merckii (bedding dahlia)  Spermatophyta; Wiridiplantae; Streptophyta; Embryophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core e asterids; campanulids; Asterales; Asteraceae; Asterc Coreopsideae; Dahlia.  1 (Dases 1 to 446)  Broekaert, W.F., Francois, I.E.J.A., Bolle, M.F.C.D., E Ray, J.A.  Method of genetic expression of polyprotein in plant Patent: JP 2002523047-A 1 30-JUL-2002; SYNGENTA LTD  OS Dahlia merckii PN JP 2002523047-A/1  PD 30-JUL-2002  PF 17-AUG-1999 JP 2000566429	18-AUG-1998 GB 9818001.1,04-DEC-1998 GB 9826753.7	
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BD223232  Method of genetic expression of polyprotein in plant BD223232  BD223232.  BD23232.  BD23232.1 GI:3303002  JP 2002523047-A/1.  Dahlia merckii (bedding dahlia)  Mohlia merckii (bedding dahlia)  Mohlia merckii (bedding dahlia)  Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Embryophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core e asterids; campanulids; Asterales; Asteraceae; Asterids; coreopsideae; Dahlia.  1 (bases 1 to 446)  Broekaert, W.F., Francois, I.E.J.A., Bolle, M.F.C.D., E Ray, J.A.  Method of genetic expression of polyprotein in plant patent: JP 2002523047-A 1 30-JUL-2002;  SYNGENTA LTD  OS Dahlia merckii  PN JP 2002523047-A/1		
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BD223232  Method of genetic expression of polyprotein in plant BD223232  BD223232  BD22332.1 GI:33033002  JP 2002523047-A/1.  Dahlia merckii (bedding dahlia)  M Dahlia merckii (sedding dahlia)  M Dahlia merckii (sedding dahlia)  M Dahlia merckii (sedding dahlia)  Spermatophyta; Magnoliophyta; Embryophyta; Syermatophyta; Magnoliophyta; eudicotyledons; core easterids; campanulida; Asterales; Asteraceae; Astera (coreopsideae; Dahlia.  1 (bases 1 to 446)  Broekaert,W.F., Francois,I.E.J.A., Bolle,M.F.C.D., ERay,J.A.  Method of genetic expression of polyprotein in plant Patent: JP 2002523047-A 1 30-JUL-2002; SYNGENTA LTD		COMMENT
BD223232  Method of genetic expression of polyprotein in plant BD223232  BD223232  BD223232. GI:3303002  JP 2002523047-A/1.  Dahlia merckii (bedding dahlia)  Dahlia merckii (bedding dahlia)  M Dahlia merckii (bedding dahlia)  Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Ewbryophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core e asterids; campanulids; Asterales; Asteraceae; Astero Coreopsideae; Dahlia.  1 (Dases 1 to 446)  Broekaert, W.F., Francois, I.E.J.A., Bolle, M.F.C.D., E Ray, J.A.  Method of genetic expression of polyprotein in plant Patent: JP 2002523047-A 1 30-JUL-2002;	SYNGENTA LTD	
BD223232  Method of genetic expression of polyprotein in plant BD223232  BD22332.1 GI:33033002  JP 2002523047-A/1.  Dahlia merckii (bedding dahlia)  Bukaryota; Viridiplantae; Streptophyta; Embryophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core e asterids; campanulids; Asterales; Asteraceae; Aster Coreopsideae; Dahlia.  1 (bases 1 to 446)  Broekaert, W.F., Francois, I.E.J.A., Bolle, M.F.C.D., E Ray, J.A.  Method of genetic expression of polyprotein in plant	_	JOURNAL
BD223232  Method of genetic expression of polyprotein in plant BD223232  BD223232  BD22332.1 GI:33033002  JP 2002523047-A/1.  Dahlia merckii (bedding dahlia)  Bukaryota; Viridiplantae; Streptophyta; Embryophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core e asterids; campanulids; Asterales; Asteraceae; Aster Coreopsideae; Dahlia.  1 (bases 1 to 446)  Broekaert, W.F., Francois, I.E.J.A., Bolle, M.F.C.D., E Ray, J.A.	Method of genetic expression of polyprotein in plant	TITLE
BD223232  Method of genetic expression of polyprotein in plant BD223232  BD223232  BD223232.1 GI:33033002  JP 2002523047-A/1.  Dahlia merckii (bedding dahlia)  M Dahlia merckii (bedding dahlia)  M Dahlia merckii (Magnoliophyta; Embryophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core e asterids; campanulids; Asterales; Asteraceae; Asterc Coreopsideae; Dahlia.  1 (bases 1 to 446)  1 (bases 1 to 446)  1 (bases 1 to 446)	Ray J.A.	
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BD223232  Method of genetic expression of polyprotein in plant BD223232  BD223322.1 GI:33033002  JP 2002523047-A/1.  Dahlia merckii (bedding dahlia)  Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core e asterids; campanulids; Asterales; Asteraceae; Asterc Coreopsideae; Dahlia.		REFERENCI
BD223232  Method of genetic expression of polyprotein in plant BD22323  BD223232  BD223232.1 GI:33033002  JP 2002523047-A/1.  Dahlia merckii (bedding dahlia)  M Dahlia merckii (bedding dahlia)  M Dahlia merckii (sedding dahlia)  Spermatophyta; Magnoliophyta; eudicotyledons; core e asterids; campanulids; Asterales; Asteraceae; Asterc	Coreopsideae; Dahlia.	
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IAN JEFFEX EVANS, JOHN ANTHONY RAY
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/organism="Dahlia merckii"
/mol_type="genomic DNA"
/db_xref="taxon:43367"
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SYNGENTA LTD
OS Artifici
PN JP 20025
PD 30-JUL-2
PF 17-AUG-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                synthetic construct
synthetic construct
other sequences, artificial sequences.
1 (bases 1 to 606)
Broekeert, W.F., Francois, I.E.J.A., Bol
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                                                                ANTHONY RAY
PC CI2N15/09, A01H1/00, C07K1/12, C12N5/10, C12P21/02//(C12N5/10, C12R1:91),
PC C12N15/00, C12N5/00, (C12N5/00, C12R1:91)
PC C12N15/00 of Artificial Sequence: Synthetic sequence FH CC Description of Artificial Sequence: Synthetic sequence FH Key Location/Qualifiers
FT CDS (76) (597).
                                                                                                                                                                                                                                      PN JP 2002523047-A/5

PD 30-JUL-2002

PF 17-AUG-1999 JP 2000566429

PR 18-AUG-1999 GB 9818001.1,04-DEC-1998 GB

WILLEM FRANS BROEKAERT, ISABELLE ELSA JEANNE
AUGUSTINE FRANCOIS,
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JP 2002523047-A/5.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCAATGTAAATCATGGGAGGGTGCGGCCCATGGAGCGTGTCATGTGCGTAACGGGAAAC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TATGCGAGAAAGCTAGCAAGACATGGTCGGGAAACTGTGGCAATACGGGACATTGTGACA
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1. .606
/organism="synthetic
                                         Location/Qualifiers
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                                        Query Match
Best Local S
Matches 287
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Best Local S
Matches 289
                                                                                                                                                                                                                                                                                                                                                                                    TITLE
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                                                                                                                                          Bource
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OS Artificial Sequence
PN JP 2002523047-A/15
PD 30-JUL-2002
PF 17-AUG-1999 JP 2000566429
PF 18-AUG-1998 GB 9818001.1,04-DEC-1998 GB
WILLEM FRANCE BROEKAERT, ISABELLE ELSA JEANNE
AUGUSTINE FRANCESCO COLETA DE BOLLE, IAN JEFFR
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155 AGATATCGCATCCGTTAGTGGAGAACTATGCGAGAAAGCTAGCAAGACATGGTCGGGAAA
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289; Conservative
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PC C12N15/
C12R1:91),
PC C12N15/
CC Descrip
Key
FT CDS
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1 (bases 1 to 557)
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                                                                                                                                                                                                                                                                                                                                                                    Method of genetic expression of polyprotein in plant Patent: JP 2002523047-A 15 30-JUL-2002;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                            synthetic construct
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                                                    Similarity
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Description of Artificial Sequence: Sy
Location/Qualifiers
CDS (3) (548)
                                                                                                                                                                                                                                           MIGUEL FRANCESCO COLETA DE BOLLE,IAN JEFFREY
                                        Conservative
                                                                                                                                                                                                                                C12N15/09, A01H1/00, C07K1/12, C12N5/10, C12P21/02// (C12N5/10,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        46 557 of genetic expression
                                                                                                                                                     Location/Qualifiers
                                                                                                  /organism="synthetic construct"
/mol_type="genomic DNA"
/db_xref="taxon:32630"
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/db_xref="taxon:32630"
                                                    63.7%;
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                                      Score 284; DB 6;
Pred. No. 7.6e-63;
0; Mismatches 5
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Pred. No. 1.1e-63;
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Best Local Similarity
Matches 217; Conserv
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PR 18-AUG-1998 GB 9818001.1,04-DEC-1998 GB 981LLEM FRANCS BROEKAERT,ISABELLE ELSA JEANNE AUGUSTINE FRANCOIS,
PI MIGUEL FRANCESCO COLETA DE BOLLE,IAN JEFFREY EVI ANTHONY RAY
PC C12N15/09,A01H1/00,C07K1/12,C12N5/10,C12P21/02//C12R1:91),
PC C12N15/00,C12N5/00,C12N5/00,C12R1:91)
PC C12N15/00,C12N5/00,C12N5/00,C12R1:91)
PC C12N15/00,C12N5/00,C12N5/00,C12R1:91)
CC Description of Artificial Sequence: Synthetic second Color (76), (525).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     other sequences; artificial sequences.

1 (bases 1 to 534)

Broekaert, W.F., Francois, I.E.J.A., Bolle, M.F.C.D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Method of genetic expression of polyprotein in plant Patent: JP 2002523047-A 3 30-JUL-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JP 2002523047-A/3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BD223234.1 GI:33033004
                                                                                                                                                                              AGATATCGCATCCGTTAGTGGAGAAACTATGCGAGAAAGCTAGCAAGACATGGTCGGGAAA
                                                                                      CTGTGGCAATACGGGACATTGTGACAAACCAATGTAAATCATGGGAGGGTGCGGCCCATGG
                                                                                                                                                     AGATATCGCATCCGTTAGTGGAGAACTATGCGAGAAAGCTAGCAAGACGTGGTCGGGCAA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTGTGGCAACACGGGACATTGTGACAACCAATGTAAATCATGGGAGGGTGCGGCTCACGG
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AGCGTGTCATGTGCGTAACGGGAAACACATGTGTTTCTGTTTACTTCAATTGTAAAAAAAGC
                                                        CTGTGGCAACACGGGACATTGTGACAACCAATGTAAATCATGGGAGGGTGCGGCCCATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGCGTGTCATGTGCGTAACGGGAAACACATGTGTTTCTGTTACTTCAATTGTAAAAAAGC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Artificial Sequence

Artificial Sequence

JP 2002523047-A/3
30-JUL-2002
17-AUG-1999 JP 2000566429
18-AUG-1998 GB 9818001.1,04-DEC-1998
18-AUG-1998 GB 188001.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C12N15/09, A01H1/00, C07K1/12, C12N5/10, C12P21/02//(C12N5/10,
                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                of genetic expression
                                                                                                                                                                                                                                                                                                                                                               /organism="synthetic construct"
/mol_type="genomic DNA"
/db_xref="taxon:32630"
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                             48.3%;
                                                                                                                                                                                                                                              Score 215.2; DB 6;
Pred. No. 5.2e-45;
0; Mismatches 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           534
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence: Synthetic sequence
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                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                               Length
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                                                                                                                                                                                                                                                                                                    534;
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DEFINITION
ACCESSION
VERSION
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BD223245
                                   REFERENCE
AUTHORS
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AUTHORS
TITLE
JOURNAL
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KEYWORDS
SOURCE
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DEFINITION
ACCESSION
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BD240936
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Best Local S
Matches 217
                                                                                                  ORGANISM
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OS ATTIFICA
PN JP 20025
PN JP 20025
PN JP 20025
PN JP 400-1
PR 18-AUG-1
PR 18-AUG-1
PR 18-AUG-1
PR 12-AUG-1
PR 12
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                                                                                             synthetic construct
synthetic construct
                                                                                                                                     JP 2002523047-A/14.
                                                                                                                                                      BD223245
Method of genetic expres
BD223245
BD223245.1 GI:33033015
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Evans, I.J. and Ray, J.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           synthetic construct synthetic construct
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Polynucleotide sequences
BD240936
                  Ray,J.A.
                                   Broekaert,W.F.,
                                                other sequences; artificial sequences
1 (bases 1 to 485)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Polynucleotide sequences
Patent: JP 2002523052-A 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          other sequences; artificial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BD240936.1 GI:33050706
JP 2002523052-A/22.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGATATCGCATCCGTTAGTGGAGAACTATGCGAGAAAGCTAGCAAGACATGGTCGGGAAA 214
                                                                                                                                                                                                                                                                                                                                                                                                                                       AGCGTGTCATGTGCGTAACGGGAAACACATGTGTTTCTGTTACTTCAATTGTAAAAAAGC 334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTGTGGCAATACGGGACATTGTGACAACCAATGTAAATCATGGGAGGGTGCGGCCCATGG 274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGATATCGCATCCGTTAGTGGAGAACTATGCGAGAAAGCTAGCAAGACGTGGTCGGGCAA
                                                                                                                                                                                                                                                                                                                                                CGAAAAGCTTGCTCAAGACAAACTTAAAGCCGAACAACTC 374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTGTGGCAACACGGGACATTGTGACAACCAATGTAAATCATGGGAGGGTGCGGCCCATGG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        30-JUL-2002
17-AUG-1999 JP 2000566448
18-AUG-1998 GB 9818003.7
IAN JEFFREY EVANS, JOHN ANTHONY RAY
C12N15/09, A01H5/00, C07K14/415, C12N5/10//(C12N5/10, C12R1:91),
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism="synthetic construct"
/mol_type="genomic DNA"
/db_xref="taxon:32630"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
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                                   Francois, I.E.J.A.,
                                                                                                                                                                                              485
expression
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 215.2; DB 6
Pred. No. 5.2e-45;
0; Mismatches 3
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                                   Bolle, M.F.C.D.,
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                                   Evans, I.J.
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viria.

"pyra; Mag,
"ds; campanulta.
"eopsideae; Dahila.
"loaees 1 to 577)
Evans, I.J. and Ray, J.A.
Polynucleotide sequences
Patent: JP 2002523052-A 4 30---
SYNGENTA LTD
SYNGENTA LTD
SYNGENTA LTD
OS Dahlia merckii (dab'
PN JP 2002523052-A/'
PN JP 2002523052-A/'
PN JP 30-JUL-2002
PF 17-AUG-199
PR 18-AUG-1°
PC C12'
PC C12'
PC C12'
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BD240918
LOCUS
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ACCESSION
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PC C12N15/
C12R1:91),
                                                                                                                                                                                                                                                                                                                                                                           Dahlia merckii (bedding dahlia)
Dahlia merckii
                                                                                                                                                                                                                                                                                                                                                                                                                     BD240918.1 GI:33050688 JP 2002523052-A/4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Polynucleotide sequences.
BD240918
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            C12N15/09,A01H5/00,C07K14/415,C12N5/10//(C12N5/10,C12R1:91),C12N15/00,C12N5/00,C12R1:91)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                       17-AUG-1999 JP 2000566448
18-AUG-1998 GB 9818003.7
IAN JEFFREY EVANS, JOHN ANTHONY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism="synthetic co
/mol_type="genomic DNA"
/db_xref="taxon:32630"
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97.7%;
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; Pred. No. 3.5e
0; Mismatches
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TITLE
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PN JP 2002523047-A/14
PD 30-JUL-2002
PF 17-AUG-1999 JP 2000566429
PR 18-AUG-1999 GB 9818001.1,04-DEC-1998
WILLEM FRANS BROEKAERT, ISABELLE ELSA JEANNE
AUGUSTINE FRANCOIS,
Eukaryota, Viridiplantae; Streptophyta; Embryophyta; Trach
Spermatophyta; Magnoliophyta; eudicotyledons; core eudicot
asterids; campanulids; Asterales; Asteraceae; Asteroideae;
Coreopsideae; Dahlia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Method of genetic expression of polyprotein Patent: JP 2002523047-A 14 30-JUL-2002; SYNGENTA LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTGTGGCAATACGGGACATTGTGACAACCAATGTAAATCATGGGAGGGTGCGGCCCATGG 274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGATATCGCATCCGTTAGTGGAGAAACTATGCGAGAAAGCTAGCAAGACATGGTCGGGAAA 214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGCGTGTCATGTGCGTAACGGGAAACACATGTGTTTCTGTTACTTCAATTGTAAAAAAGC 334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGATATCGCATCCGTTAGTGGAGAACTATGCGAGAAAGCTAGCAAGACGTGGTCGGGCAA
                                                                                                                                                                                                                                                                                                                                                        CGAAAAGCTTGCTCAAGACAAACTTAAAGCCGAACAACTC
                                                                                                                                                                                                                                                                                                                                                                                                    CGAAAAGCTTGCTCAAGACAAACTTAAAGCCGAACAACTC 374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTGTGGCAACACGGGACATTGTGACAACCAATGTAAATCATGGGAGGGTGCGGCTCACGG 184
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Description of Artificial Sequence: Sy
Location/Qualifiers
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MIGUEL FRANCESCO COLETA DE BOLLE, IAN JEFFREY
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                                              eudicots;
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                                                                    Tracheophyta;
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LOCUS
DEFINITION
ACCESSION
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SOURCE
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ORIGIN
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                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                   TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM
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Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
                                                                source
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                                                                                        OS ARTÉFICIAL Sequence
PN JP 2002523047-A/12
PD J0-JUL-2002
PF 17-AUG-1999 JP 2000566429
PF 17-AUG-1999 JP 2000566429
PF 17-AUG-1999 GB 9818001.1,04-DEC-1998 GB
WILLEM FRANGS BROEKAERT,ISABELLE ELSA JEANNE
AUGUSTINE FRANCCIS,
PI MIGUEL FRANCESCO COLETA DE BOLLE,IAN JEFFR:
ANTHONY RAY
PC C12N15/09,A01H1/00,C07K1/12,C12N5/10,C12P2
PC C12N15/09,C12N5/00,(C12N5/00,C12R1:91)
CC Description of Artificial Sequence: Synthe-
Key
FT CDS

13...(476).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             82
                                                                                                                                                                                                                                                                                                                                                                  Method of genetic expression of polyprotein in plant Patent: JP 2002523047-A 12 30-JUL-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                other sequences; artificial sequences.
1 (bases 1 to 485)
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JP 2002523047-A/12.
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                                                                                                                                                                                                                                                                                                                                                    SYNGENTA LTD
                                                                                                                                                                                                                                                                                                                                                                                                                    Broekaert, W.F.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     synthetic construct
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCAAAAGCTTGACCGTGATGCCAAGAAAGTGGTTCCAAACGTTGAACATCCG 446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCAAGAGCTTGACCGTGATGCCAAGAAAGTGATTCCGAACGTTGAACATCCG
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                                                                                                                                                                                                             MIGUEL FRANCESCO COLETA DE BOLLE, IAN JEFFREY EVANS, JOHN
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Key Location,
CDS (20) (:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       43 485 of genetic expression
            /organism="synthetic construct"
/mol_type="genomic DNA"
/db_xref="taxon:32630"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Dahlia merckii"
/mol_type="genomic DNA"
/db_xref="taxon:43367"
                                                                              Location/Qualifiers
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                                                                                                                                                                                                                                                                                                                                                                                                                   Francois, I.E.J.A., Bolle, M.F.C.D.,
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Pred. No. 3.7e-35;
0; Mismatches 28;
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REFERENCE
AUTHORS
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DEFINITION
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BD223239
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KEYWORDS
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                                                                                                         Query Match
Best Local Similarity
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Best Local Similarity
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                                                                                                                                                                                                       source
                                                                                                                                                                                                                                                     PI MIGUEL FRANCOIS,
PI MIGUEL FRANCESCO COLETA DE BOLLE, IAN JEPFREY EV.
ANTHONY RAY
PC C12N15/09, A01H1/00, C07K1/12, C12N5/7
C1221191),
PC C12N15/00, C17N7
               215
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                                                                                              180;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             206;
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Method of
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         other sequences; artificial sequences.

1 (bases 1 to 446)

Broekaert, W.F., Francois, I.E.J.A., Bolle, M.F.C.D., Evans, I.J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BD223239.1 GI:33033009 JP 2002523047-A/8.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                synthetic construct
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CTGTGGCAATACGGGACATTGTGACAACCAATGTAAATCATGGGAGGGTGCGGCCCATGG
                                                        AGATATCGCATCCGTTAGTGGAGAACTATGCGAGAAAGCTAGCAAGACATGGTCGGGAAA 214
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGCGTGTCATGTGCGTAACGGGAAACACATGTGTTTCTGTTACTTCAATTGTGCTAACGC
                                                                                             38.6%;
ilarity 93.3%;
Conservative
                                                                                                                                                                                                                                         C12N15/00,C12N5/00,(C12N5/00,C12R1:91)
Description of Artificial Sequence: Sy
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                             Artificial Sequence JP 2002523047-A/8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                 C12N15/09, A01H1/00, C07K1/12, C12N5/10, C12P21/02//(C12N5/10,
                                                                                                                                                          /organism="synthetic construct"
/mol_type="genomic DNA"
/db_xref="taxon:32630"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   446
genetic expression
                                                                                                                                                                                                                  ocation/Qualifiers
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                                                                                             0;
                                                                                             Score 172.2; DB 6;
Pred. No. 7.3e-34;
0; Mismatches 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 173.2; DB
Pred. No. 4e-34;
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RESULT 11
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PN JP 2002523047-A/13
PD 30-JUL-2002
PF 17-AUG-1999 JP 2000566429
PF 17-AUG-1999 GB .9818001.1,04-DEC-1998 GB 98
WILLEM FRANS BROEKAERT,ISABELLE ELSA JEANNE
AUGUSTINE FRANCOIS,
PI MIGUEL FRANCESCO COLETA DE BOLLE,IAN JEFFREY EVA
PNIHONY RAY
PC C12M15/09,A01H1/00,C07K1/12,C12N5/10,C12P21/02//
PC C12M15/00,C12N5/00,C12N5/00,C12R1:91)
PC C12M15/00,C12N5/00,C12N5/00,C12R1:91)
PC C12M15/00,C12N5/00,C12N5/00,C12R1:91)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                       155 AGATATCGCATCCGTTAGTGGAGAACTATGCGAGAAAGCTAGCAAGACATGGTCGGGAAA 214
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synthetic construct
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BD223244
BD223244.1 GI:33033014
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       other sequences; artificial sequences.
1 (bases 1 to 1093)
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                                                                                                        TGAGGAAGCTGCTGCTATTCCTGAAGCTTCTGAAGAACTTGCTCAAGAAGAAGCTCC
                                                                                                                                                                                                                                                               AGCGTGTCATGTGCGTAACGGGAAACACATGTGTTTCTGTTACTTCAATTGTAAAAAAAGC 334
                                                                                                                                                                                                                                                                                                                                                       CTGTGGCAATACGGGACATTGTGACAACCAATGTAAATCATGGGAGGGTGCGGCCCATGG
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  TG 306
                                                    TG 393
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/mol_type="genomic DNA"
/db_xref="taxon:32630"
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Pred. No. 2.8e-33;
0; Mismatches 35
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Best Local Similarity
                                                                    ORGANISM
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Dimorphotheca sinuata (African daisy)
Dimorphotheca sinuata
Eukaryota; Viridiplantae; Streptophyta; Embryophyta;
Spermatophyta; Magnoliophyta; eudicotyledons; core eu
asterids; campanulids; Asterales; Asteraceae; Asteroi
Calenduleae; Dimorphotheca.
                                                                                                                      460 bp
Sequence 3 from Patent WO0068405.
AXO46745
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OS Artificial Sequence
PN JP 2002523047-A/2
PD 30-JUL-2002
PF 17-AUG-1999 JP 2000566429
PF 17-AUG-1999 GB 9818001.1,04-DEC-1998
PR 18-AUG-1998 GB 9818DLE ELSA JEANNE
AUGUSTINE FRANCOIS,
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Broekaert, W.F., Francois, I.E.J.A., Bolle, M.F.C.D.,
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synthetic construct
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JP 2002523047-A/2.
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                                                                                                                                                                                                                                                                                                                                                                             CTGTGGCAATACGGGACATTGTGACAACCAATGTAAATCATGGGAGGGTGCGGCCCATGG 274
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Description of Artificial Sequence: Sy
Location(Qualifiers
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism="synthetic co
/mol_type="genomic DNA"
/db_xref="taxon:32630"
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                                                                                                             GI:11876281
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Pred. No. 4.4e-33
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               155 AGATATCGCATCCGTTAGTGGAGAACTATGCGAGAAAGCCTAGCAAGACATGGTCGGGAAA 214
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E.I. DU
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Sequence 1 from Patent WO0068405
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                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledona; core eudicots; asterida; campanulida; Asteralea; Asteraceae; Asteroideae; Calenduleae; Dimorphotheca.
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/mol_type="unassigned DNA"
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Pred. No. 6.3e-33;
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YANG BROEKABRT, ISABELLE 1

YANG FRANCOIS,

YANGUEL FRANCESCO COLETA DE BOL
ANTHONY RAY
PC C12N15/09, A01H1/00, C07F'
C12R1:91),
CC C12N15/00, C12'''
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FT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                   OS Artificial Sequence
PN JP 2002523047-A/6
PD 30-JUL-2002
PF 17-AUG-1999 JP 2000566429
PF 18-AUG-1998 GB 9818001.1,04-DEC-1998
WILLEM FRANS BROEKAERT,ISABELLE ELSA JEANNE
AUGUSTINE FRANCOIS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Broekaert, W.F., Francois, I.E.J.A., Bolle, M.F.C.D., Evans, I.J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  other sequences; artificial sequences.
1 (bases 1 to 534)
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JP 2002523047-A/6.
                                                                                                                                       AGATATCGCATCCGTTAGTGGAGAAACTATGCGAGAAAGCTAGCAAGACATGGTCGGGAAA 214
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AGCGTGTCATGTGCGTAACGGGAAACACATGTGTTTCTGTTACTTCAATTGT
                             AGCGTGTCATGTGCGTAACGGGAAACACATGTGTTTCTGTTACTTCAATTGT 326
                                                                                                                     AGATATCGCATCCGTTAGTGGAGAACTATGCGAGAAAGCTAGCAAGACGTGGTCGGGCAA
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                                                            CTGTGGCAACACGGGACATTGTGACAACCAATGTAAATCATGGGAGGGTGCGGCCCATGG
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Description of Artificial Sequence: Sy
Location/Qualifiers
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/db_xref="taxon:32630"
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Pred. No. 1.5e-32;
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Search completed: March Job time : 2320 secs

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Sequence 58, Appl
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Sequence 58, Appl
Sequence 32, Appl
Sequence 9, Appl
Sequence 9, Appl
Sequence 32, Appl
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Sequence 18612, Appl
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Sequence 16073, Appl
Sequence 16073, Appl
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1: /cgn2_6/ptodata/1/ina/5A_COMB.seq:*
2: /cgn2_6/ptodata/1/ina/5B_COMB.seq:*
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5: /cgn2_6/ptodata/1/ina/PCTUS_COMB.seq:*
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US-09-589-733C-6
US-08-377-687-31
US-08-971-982-31
US-08-971-982-33
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US-08-627-706-14
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US-09-829-381D-12
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APPLICANT: Bidney, Dennis L.

APPLICANT: Crasta, Oswald R.

APPLICANT: Duvick, Jon

APPLICANT: Hu, Xu

APPLICANT: Hu, Xu

APPLICANT: Lu, Guihua

ITILE OF INVENTION: Sunflower Anti-Pathogenic Proteins and

ITILE OF INVENTION: Genes and their Uses

FILE REFERENCE: 5718-90

CURRENT APPLICATION NUMBER: US/09/589,733C

CURRENT APPLICATION NUMBER: 60/140,646

PRIOR APPLICATION NUMBER: 60/140,646

PRIOR APPLICATION NUMBER: 60/162,904

PRIOR FILING DATE: 1999-01-01

NUMBER OF ESG ID NOS: 41

SOFTWARE: FastSEQ for Windows Version 3.0

SEQ ID NO 6

LENGTH: 565

TYPE: DNA

ORGANISM: Helianthus annuus
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Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches 189;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         395
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                                                  CCAAAAG
                                                                                                                                                     CGAAAAGCTTGCTCAAGACAAACTTAAAGCCGAACAACTCGCTCAAGACAAACTTAATGC 394
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     CGAAAAG
                                                                                                                    CCAGAAGTTGGCTCAGGATAAACTCAGAGCGGAAGAGCTCGCCAAGGAAGAATTGAACC 338
                                                                                                                                                                                                                                      AGCTTGTCACGTGCGCGATGGGAAACACATGTGCTTCTGCTACTTCAACTGTTCCAAAGC
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US-08-777-192-58
US-08-971-982-58
US-09-589-733C-32
US-08-22-463-14
US-09-589-733C-9
US-08-377-687-32
US-08-377-687-32
US-08-777-192-32
US-08-777-192-32
US-09-949-016-154963
US-09-949-016-154963
US-09-949-016-178612
US-09-949-016-16859
US-09-949-016-16859
US-09-949-016-16073
US-09-949-016-11789
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Pred. No. 8.6e-38;
0; Mismatches 58;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 565;
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Result No.

Score

Query Match

Length

2222222111111111 26543210987654311 7654331098765431

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Gaps

218

Minimum Maximum

88

Total number

Post-processing:

Database

Title: Perfect score:

Scoring table: Sequence: Run

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RESULT 3
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Sequence 31, Application US/08777192
PATENT NO. 5824869
GENERAL INFORMATION:
APPLICANT: BROEKAERT, WILLEM F.
                                                                                                                                                                                                                                                                                                                                                                                                     Matches 118; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 22.3%;
Best Local Similarity 79.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 3 Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: US/08/377,687
FILING DATE:
CLASSIFICATION: 800
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/002,480
FILING DATE: 04-JNA-1993
ATTORNEY/AGENT INFORMATION:
NAME: KORULIS, PAUL N.
REGISTRATION NUMBER: 16,773
REFERENCE/DOCKET NUMBER: 99042/SEE.:
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TENGTH: 150 base pa:
TYPE: nucleic acid
STRANDEDNESS: both
TOPOLOGY: linear
MOLECULE TYPE: cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEFAX: 202-822-0944
INFORMATION FOR SEQ ID NO:
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIN Release #1.0,
CURRENT APPLICATION DATA:
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ADDRESSEE: CUSHMAN DARBY & CUSHMAN
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TITLE OF INVENTION: BIOCIDAL PROTEINS
NUMBER OF SEQUENCES: 59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEPHONE: ZUZ C TO NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CITY: WASHINGTON STATE: D.C.
                                                                                                                                                              121
                                                                                                                                                                                                   297 AAACACATGTGTTTCTGTTACTTCAATTG 325
                                                                                                                                                                                                                                                                                237 GACAACCAATGTAAATCATGGGAGGGTGCGGCCCATGGAGCGTGTCATGTGCGTAACGGG 296
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o. 5538525
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OSBORN, RUPERT W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REES, SARAH B.
TERRAS, FRANKY R.G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BROEKAERT, WILLEM F.
                                                                                                                                                                                                                                                                                                                                                                                                     0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        99042/SEE.36525/US/A
                                                                                                                                                                                                                                                                                                                                                                                                                       Score 99.4; DB 1;
Pred. No. 4.6e-21;
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US-08-777-192-31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: 04-JAN-1993
ATTORNEY/AGENT INFORMATION:
NAME: KOKULIS, PAUL N.
REGISTRATION NUMBER: 16,773
REFERENCE/DOCKET NUMBER: 9904
TELECOMMUNICATION INFORMATION:
TELEPAN: 202-861-3000
TELEPAN: 202-861-3000
INFORMATION FOR SEQ ID NO: 31:
                                                                                                                                                                     Sequence 31, Application US/08971982 Patent No. 6187904 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE CHARACTERISTICS:
LENGTH: 150 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: VANDERLEYDEN, JOZEF
TITLE OF INVENTION: BIOCIDAL PROTEINS
NUMBER OF SEQUENCES: 59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: nucleic acid STRANDEDNESS: both
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STRANDEDNESS: bot TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COUNTRY: U
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CITY: WASHINGTON
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CLASSIFICATION:
TERRÀS, FRANKY R.G.
VANDERLEYDEN, JOZEF
TITLE OF INVENTION: BIOCIDAL PROTEINS
NUMBER OF SEQUENCES: 59
                                                                                 APPLICANT: BROEKAERT, WILLEM F.
CAMMUE, BRUNO P.A.
OSBORN, RUPERT W.
REES, SARAH B.
                                                                                                                                                                                                                                                                                                                                                  297 AAACACATGTGTTTCTGTTACTTCAATTG 325
                                                                                                                                                                                                                                                                                                                            121 AAGCATATGTGCTTCTGCTACTTCAACTG 149
                                                                                                                                                                                                                                                                                                                                                                                                                                                   237 GACAACCAATGTAAATCATGGGAGGGTGCGGCCCATGGAGCGTGTCATGTGCGTAACGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     177 GAACTATGCGAGAAAGCTAGCAAGACATGGTCGGGAAACTGTGGCAATACGGGACATTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   118;
                                                                                                                                                                                                                                                                                                                                                                                                             61 GATAACCAATGCAAGTCTTGGGAGGGAGCTGCTCATGGAGCTTGCCATGTTAGAAACGGA 120
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FRANKY R.G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RUPERT W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BRUNO P.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               22.3%; Score 99.4; DB 1; Length 150; 79.2%; Pred. No. 4.6e-21; tive 0; Mismatches 31; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US 08/002,480
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TOPOLOGY: linear

MOLECULE TYPE: CDNA
SEQUENCE DESCRIPTION: SEQ ID NO: 31:
US-08-971-982-31
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                                                                                                                                                                                                                                                                                                                                                                                           RESULT 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
Matches 118; Conserv
                                                                                                                                                                                                                                                                   Patent No. 5538525
GENERAL INFORMATION:
APPLICANT: BROEKAE
APPLICANT: CAMMUE.
                                                                                                                                                                                                                                                                                                                                                  Sequence 33,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   INFORMATION FOR SEQ ID NO: 31:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                APPLICANT:
COMPUTER READABLE FORM:
                                                                                                                                 CORRESPONDENCE ADDRESS:
                                                                                                                                                     TITLE OF INVENTION:
                                                                    STREET: 1100 NEW CITY: WASHINGTON
                                  COUNTRY:
                                                                                                                 ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARRE: PAtentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/971,982
FILING DATE: 17-NO. 6187904-1997
CLASSIFICATION: <UNKnown>
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ZIP: 20005
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAMÉ: KOKULIS, PAUL N.
REGISTRATION NUMBER: 16,773
REFERENCE/DOCKET NUMBER: 99042/SEE.36525/US/A
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-861-3000
TELEFAX: 202-822-0944
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: US 08/002,480 FILING DATE: 04-JAN-1993 ATTORNEY/AGENT INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            177 GAACTATGCGAGAAAGCTAGCAAGACATGGTCGGGAAAACTGTGGCAATACGGGACATTGT 236
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                  20005
                                                    D.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAGCATATGTGCTTCTGCTACTTCAACTG 149
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TYPE: nucleic acid
STRANDEDNESS: both
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CITY: WASHINGTON
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                                                                                                                                                                                                                                                                                                                                                    Application US/08377687
                                      USA
                                                                                           CUSHMAN DARBY & CUSHMAN 1100 NEW YORK AVENUE, N.W.
                                                                                                                                                                    TERRAS, FRANKY R.G.
VANDERLEYDEN, JOZEF
VENTION: BIOCIDAL PROTEINS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                REES,
                                                                                                                                                                                                                                               CAMMUE, BRUNO P.A.
OSBORN, RUPERT W.
                                                                                                                                                                                                                                                                                           BROEKAERT, WILLEM F.
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                                                                                                                                                                                                                                SARAH B.
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79.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 99.4; DB 3; Length 150; Pred. No. 4.6e-21; O; Mismatches 31; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
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US-08-777-192-33
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Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches 113;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CLASSIFICATION: 800
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/002
FILING DATE: 04-JAN-1993
ATTORNEY/AGENT INFORMATION:
NAME: KOKULIS, PAUL N.
REGISTRATION NUMBER: 16,773
REFERENCE/DOCKET NUMBER: 9904
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-861-3000
                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
APPLICANT: BROEKA
APPLICANT: CAMMUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELEFAX: 202-822-0944
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                      APPLICANT: VANDERLEYDEN, JOZEF
TITLE OF INVENTION: BIOCIDAL PROTEINS
NUMBER OF SEQUENCES: 59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TOPOLOGY: 11
MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE CHARACTERISTICS:
LENGTH: 150 base pairs
TYPE: nucleic acid
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURERNT APPLICATION DATA:
APPLICATION NUMBER: US/08/777,192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CURRENT APPLICATION DATA:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
                                                                                                                                                                                   STREET: 1100 NEW CITY: WASHINGTON STATE: D.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: FILING DATE:
                                                                                                                                                                                                                                   ADDRESSEE: CUSHMAN DARBY & CUSHMAN STREET: 1100 NEW YORK AVENUE, N.W.
                                                                                                                                                                    COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            177 GAACTATGCGAGAAAAGCTAGCAAGACATGGTCGGGAAAACTGTGGGCAATACGGGACATTGT 236
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         237 GACAACCAATGTAAATCATGGGAGGGTGCGGCCCATGGAGCGTGTCATGTGCGTAACGGG 296
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                                                                                                                                                20005
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                            TERRAS, FRANKY R.G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           linear
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                                                                                                                                                                                                                                                                                                                                                                             SARAH B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20.5%; Score 91.4; DB 1; 75.8%; Pred. No. 1.4e-18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US 08/002,480
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US-08-971-982-33
; Sequence 33, Applicati
; Patent No. 6187904
; GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELEFAX: 202-822-0944
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME: KOKULIS, PAUL N.
REGISTRATION NUMBER: 16,773
REFERENCE/DOCKET NUMBER: 99042/SEE.36525/US/A
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-861-3000
TELEPHONE: 202-861-3000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TOPOLOGY: 1i
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APPLICATION NUMBER: US 08
FILING DATE: 04-JAN-1993
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: nucleic acid
STRANDEDNESS: both
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ENGTH:
               APPLICATION NUMBER: US 08/002,480
FILING DATE: 04-JAN-1993
ATTORNEY/AGENT INFORMATION:
NAME: KOKULIS, PAUL N
REGISTRATION NUMBER: 16,773
REFERENCE/DOCKET NUMBER: 99042/SEI
                                                                                                                                       COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/971, 982
FILING DATE: 17-No. 6187904-1997
CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                    ZIP: 20005
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                   CORRESPONDENCE ADDRESS:
ADDRESSEE: CUSHMAN DARBY & CUSHMAN
STREET: 1100 NEW YORK AVENUE, N.W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TERRÂS, FRANKY R.G.
VANDERLEYDEN, JOZEF
TITLE OF INVENTION: BIOCIDAL PROTEINS
NUMBER OF SEQUENCES: 59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: BROEKAERT, WILLEM F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121 AAGCATATGTGCTTCTGCTACTTCAACTG 149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           297 AAACACATGTTTTCTGTTACTTCAATTG 325
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61 GATGATCAATGCAAGTCTTGGGAGGGAGCTGCTCATGGAGCTTGCCATGTTAGAAACGGA 120
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                                                                                                                                                                                                                                                                                                                                                                                                                    CITY: WASHINGTON
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OSBORN, RUPERT W.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SARAH B
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 91.4;
Pred. No. 1.
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                   99042/SEE.36525/US/A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    No. 1.4e-18;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              36;
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                                                                         TELEFAX: 202-822-0944
INFORMATION FOR SEQ ID NO:
                                                                                                          APPLICATION NUMBER: US/08/377,687
FILING DATE:
CLASSIFICATION: 800
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/002,480
FILING DATE: 04-JAN-1993
ATTORNEY/AGENT INFORMATION:
NAME: KOKULIS, PAUL N.
REGISTRATION NUMBER: 16,773
REFERENCE/DOCKET NUMBER: 99042/SEE.
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
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INFORMATION FOR SEQ ID NO: 33:
SEQUENCE CHARACTERISTICS:
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                                                                                                                                                                                                                                                                                                                                                     MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0,
CURRENT APPLICATION DATA:
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APPLICANT: TERRAS, FRANKY R.G.
APPLICANT: VANDERLEYDEN, JOZEF
TITLE OF INVENTION: BIOCIDAL PROTEINS
NUMBER OF SEQUENCES: 59
                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy of COMPUTER: IBM PC computer:
                                                         SEQUENCE CHARACTERISTICS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STATE: D.C
  STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADDRESSEE:
                                    ENGTH: 150 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TOPOLOGY: linear MOLECULE TYPE: cDNA SEQUENCE DESCRIPTION: SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            177 GAACTATGCGAGAAAGCTAGCAAGACATGGTCGGGAAAACTGTGGGCAATACGGGACATTGT 236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121 AAGCATATGTGCTTCTGCTACTTCAACTG 149
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TYPE: nucleic acid
STRANDEDNESS: both
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAACACATGTGTTTCTGTTACTTCAATTG 325
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              USA
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leic acid
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                                                                             34:
                                                                                                                                                         99042/SEE.36525/US/A
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Pred. No. 1.4e-18;
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                                                                  STRANDEDNESS: both TOPOLOGY: linear MOLECULE TYPE: cDNA US-08-777-192-34
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Query Match 19.4
Best Local Similarity 73.8
Matches 110, Conservative
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Best Local Similarity 73.8%;
Matches 110; Conservative
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INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
SEQUENCE SHARACTERISTICS:
LENGTH: 150 base pairs
                                                                                                                                                                                                                                    PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/002,480
FILING DATE: 04-JAN-1993
ATTORNEY/AGENT INFORMATION:
NAME: KOKULIS, PAUL N.
REGISTRATION NUMBER: 16,773
REPERENCE/DOCKET NUMBER: 99042/SEE.36525/US/A
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: ISM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
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APPLICANT: VANDERLEYDEN, JOZEF
TITLE OF INVENTION: BIOCIDAL PROTEINS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
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CLASSIFICATION:
                                                                                                                                  TYPE: nucleic acid
                                                                                                                                                                                                                       TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COUNTRY: USA
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OSBORN, RUPERT W.
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                                                                                                                                                                                                                         202-861-3000
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                 19.4%;
73.8%;
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Pred. No. 4.3e-17;
0; Mismatches 39;
 Score 86.6; DB 1; Length 150; Pred. No. 4.3e-17; O; Mismatches 39; Indels
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US-08-971-982-34
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GENERAL INFORMATION:
                                                                                                                                                                             Query Match
Best Local Similarity
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                                                                                                                                                              Matches
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM_PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION UMBER: US/08/971,982
FILING DATE: 17-No. 6187904-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
APPLICATION UNMBER: US 08/002,480
FILING DATE: 04-JAN-1993
ATTORNEY/AGENT INFORMATION:
NAME: KOKULIS, PAUL N.
REGISTRATION NUMBER: 16,773
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VANDERLEYDEN, JOZEF
TITLE OF INVENTION: BIOCIDAL PROTEINS
NUMBER OF SEQUENCES: 59
CORRESPONDENCE ADDRESS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE/DOCKET NUMBER: TELECOMMUNICATION INFORMATION:
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                       237 GACAACCAATGTAAATCATGGGAGGGTGCGGCCCATGGAGCGTGTCATGTGCGTAACGGG 296
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                                                                                                      GAACTATGCGAGAAAGCTAGCAAGACATGGTCGGGAAAACTGTGGCAATACGGGACATTGT 236
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GATAACAAGTGCAAGTCTTGGGAGGGAGCTGCTCATGGAGCTTGCCATGTTAGATCTGGA 120
                                                                               GAGCTTTGCGAGAAGGCTTCTAAGACTTGGTCTGGAAACTGCGGAAACACTAAGCATTGC 60
                                                                                                                                                                                                                                                                                                                       LENGTH: 150 base pairs
TYPE: nucleic acid
STRANDEDNESS: both
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COUNTRY: USA
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                                                                                                                                                                                                                                                                                                                                                                                                                              TELEFAX: 202-822-0944
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CITY: WASHINGTON
                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEPHONE: 202-861-3000
                                                                                                                                                           Conservative
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                                                                                                                                                                                 19.4%;
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                                                                                                                                                           0,
                                                                                                                                                         Score 86.6; DB 3;
Pred. No. 4.3e-17;
0; Mismatches 39;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              99042/SEE.36525/US/A
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                                                                                                                                                                                                    Length 150
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RESULT 12
US-08-777-192-36
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Best Local (
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APPLICATION NUMBER: US 08/002
FILING DATE: 04-JAN-1993
ATTORNEY/AGENT INFORMATION:
NAME: KOKULIS, PAUL N.
REGISTRATION NUMBER: 16,773
REFERENCE/DOCKET NUMBER: 9904
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-861-3000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/377,687
FILING DATE:
CLASSIFICATION: 800
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CTTY: WASHINGTON
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COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                  STRANDEDNESS: both TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                     ENGTH:
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                                                                                                                                                                                                                                          178 AACTATGCGAGAAAGCTAGCAAGACATGGTCGGGAAACTGTGGCAATACGGGACATTGTG 237
                                                                                                   298 AACACATGTGTTTCTGTTACTTCAATTG 325
                                                                                                                                                                       238 ACAACCAATGTAAATCATGGGAGGGTGCGGCCCATGGAGCGTGTCATGTGCGTAACGGGA 297
                                                                                                                                                                                                                                                                              99;
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                                                                                                                                                                                                                                                                                              Similarity
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                                                                   ACTGGAAGTGCTTCTGCTACTTCGATTG 146
                                                                                                                                      ATACTCAATGCAGAAACTGGGAGTCTGCTAAGCATGGAGCTTGCCATAAG---AGAGGAA
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                                                                                                                                                                                                           ACCTTTGCGAGAGAGCTTCTCTTACTTGGACTGGAAACTGCGGAAACACTGGACATTGCG
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                                                                                                                                                                                                                                                                                                                                                                                                                                     147 base pairs
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           202-822-0944
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                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REES,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SARAH B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BIOCIDAL PROTEINS
                                                                                                                                                                                                                                                                          13.1%; Score 58.4; DB 1; 66.9%; Pred. No. 2.5e-08; tive 0; Mismatches 46;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US 08/002,480
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                                                                                                                                                                                                                                                                          46;
                                                                                                                                                                                                                                                                                                             Length 147;
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         Sequence 36, Application US/08971982
Patent No. 6187904
GENERAL INFORMATION:
APPLICANT: BROEKAERT, WILLEM F.
CAMMUE, BRUNO P.A.
OSBORN, RUPERT W.
REES, SARAH B.
                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
Matches 99; Conserv
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INFORMATION FOR SEQ ID NO:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: TERRAS, FRANKY R.G.
APPLICANT: VANDERLEYDEN, JOZEF
TITLE OF INVENTION: BIOCIDAL PROTEINS
NUMBER OF SEQUENCES: 59
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IR PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TOPOLOGY: 11
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LENGTH: 147 base pairs
TYPE: nucleic acid
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NAME: KOKULIS, PAUL N.

REGISTRATION NUMBER: 16,773

REFERENCE/DOCKET NUMBER: 99042/SEE.36525/US/A

TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 0
FILING DATE: 04-JAN-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STRANDEDNESS: both
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELEPHONE: 202-00-0944
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CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ZIP: 20005
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CITY: WASHINGTON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADDRESSEE: CUSHMAN DARBY & CUSHMAN
                                                                                                                                                                                                                 119
                                                                                                                                                                                                                                                                                                                        238 ACAACCAATGTAAATCATGGGAGGGTGCGGCCCATGGAGCGTGTCATGTGCGTAACGGGA 297
                                                                                                                                                                                                                                                                                                                                                                                            178 AACTATGCGAGAAAGCTAGCAAGACATGGTCGGGAAACTGTGGCAATACGGGACATTGTG
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                                                                                                                                                                                                                                                                                                                                                            ACCTTTGCGAGAGAGCTTCTCTTACTTGGACTGGAAACTGCGGAAACACTGGACATTGCG
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                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               linear
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ERRAS, FRANKY R.G
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Pred. No. 2.5e-08;
0; Mismatches 46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 1;
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                                                                                                                                                                                                                                                                                            Sequence 14, Application US/08627706 Patent No. 5773696
                                                                                                                                                                                                                                                                                          Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
                                                                                                  APPLICANT: Liang, Jihong
APPLICANT: Shah, Dilip M.
APPLICANT: Wu, Yonnie S.
APPLICANT: Rosenberger, Cindy A.
TITLE OF INVENTION: Antifungal Polypeptide and Methods for
TITLE OF INVENTION: Controlling Plant Pathogenic Fungi
NUMBER OF SEQUENCES: 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        INFORMATION FOR SEQ ID NO: 36:
                            CORRESPONDENCE ADDRESS:
ADDRESSEE: Charles E. Cohen, Monsanto Company, BB4F
STREET: 700 Chesterfield Village Parkway No. 5773696th
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity 66.9%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
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LENGTH: 147 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE/DOCKET NUMBER: 99042/SEE.36525/US/A TELECOMMUNICATION INFORMATION:
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APPLICATION NUMBER: US 08/002,480
FILING DATE: 04-JAN-1993
ATTORNEY/AGENT INFORMATION:
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MEDIUM TYPE: Floppy disk
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                     St. Louis
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AACACATGTGTTTCTGTTACTTCAATTG 325
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: nucleic acid
STRANDEDNESS: both
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME: KOKULIS, PAUL N. REGISTRATION NUMBER: 16,773
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Missouri
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 58.4; DB 3; pred. No. 2.5e-08; 0; Mismatches 46;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  46;
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Best Local Similarity 53.8
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 14, Application US/09103489
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APPLICANT: Liang, Jihong
APPLICANT: Shah, Dilip M.

APPLICANT: Wu, Yonnie S.

APPLICANT: Rosenberger, Cindy A.

APPLICANT: Rosenberger, Cindy A.

TITLE OF INVENTION: Controlling Plant Pathogenic Fungi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEFAX: (314)537-604
INFORMATION FOR SEQ ID NO:
                                COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/99/103,489
FILLING DATE: 24-UNN-1998
                                                                                                                                                                                                                                                                                 CORRESPONDENCE ADDRESS:
ADDRESSEE: Charles E. Cohen, Monsanto Company, BB4F
STREET: 700 Chesterfield Village Parkway No. 6215048th
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATTORNEY/AGENT INFORMATION:
NAME: CChen, Charles E.
REGISTRATION NUMBER: 34,565
REFERENCE/DOCKET NUMBER: 38-21(10700)A
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM FORMATION
CORRATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE CHARACTERISTICS
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                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQUENCES:
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                          STREET: 700 Che
CITY: St. Louis
STATE: Missouri
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TYPE: nucleic acid
STRANDEDNESS: single
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CLASSIFICATION
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                     CLASSIFICATION:
                                                                                                                                                                                                                       COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEPHONE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     223 ATACGGGACATTGTGACAACCAATGTAAATCATGGGAGGGTGCGGCCCATGGAGCGTGTC 282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     163 CATCCGTTAGTGGAGAACTATGCGAGAAAGCTAGCAAGACATGGTCGGGAAACTGTGGCA 222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                95 CAATGGTGGATGCAAGGTTGTGCGAGAGACCAAGTGGGACATGGTCAGGAGTTTGTGGGA 154
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATGTGCGTAACGGGAAACACATGTGTTTCTGTTACTTCAATTGTAAAAAAG 333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACTATGTCTTCCCAGCTCACAAATGTATTTGTTACTTCCCATGTTAATAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACAACAATGCATGCAGGAACCAATGCAGAAACCTTGAAAGAGCAGAACACGGATCTTGCA 214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (314)537-6047
                                                                                                                                                                                                                           USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (314) 537-6224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              14:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 44.6; DB 1;
Pred. No. 0.00065;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 1;
                                                                                                   #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 270;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
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NAME: Cohen, Charles E.
REGISTRATION NUMBER: 34,565
REFERENCE/DOCKET NUMBER: 38-21 (10700) A
TELECOMMUNICATION INFORMATION:
TELEPHONE: (314) 537-6047
INFORMATION FOR SEQ ID NO: 14:
SEQUENCE CHARACTERISTICS:
LENGTH: 270 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TYPE: TOPOLOGY: linear
MOLECULE TYPE: CDNA
US-09-103-489-14
                                                                                                                                                                                                                        8
Search completed: March 18, 2005, 16:31:56 Job time: 137 secs
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                                                                                                                                                                                                                                                                                                                                                                      Query Match 10.0%; Score 44.6; DB 3; Length 270; Best Local Similarity 53.8%; Pred. No. 0.00065; Matches 92; Conservative 0; Mismatches 79; Indels 0; Gaps
                                                                                        283 ATGTGCGTAACGGGAAACACATGTGTTTCTGTTACTTCCAATTGTAAAAAAA 333
                                                                                                                                                                                     155 ACAACAATGCATGCAGGAACCAATGCAGAAACCTTGAAAGAGCAGAACACGGATCTTGCA 214
                                                                                                                                                                                                                   223 ATACGGGACATTGTGACAACCAATGTAAATCATGGGAGGGTGCGGGCCCATGGAGCGTGTC 282
                                                                                                                                                                                                                                                                                                             163 CATCCGTTAGTGGAGAACTATGCGAGAAAGCTAGCAAGACATGGTCGGGAAACTGTGGCA 222
                                                                                                                                                                                                                                                                                  95 CAATGGTGGATGCAAGGTTGTGCGAGAGACCAAGTGGGACATGGTCAGGAGTTTGTGGGA 154
                                                                                                                                                                                                                                                                                                                                                                           0
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